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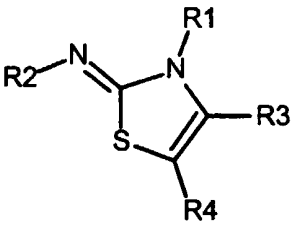
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[Suite sur la page suivante]

(54) Title: 2-ARYLIMINO-2,3-DIHYDROTHIAZOLES, AND THEIR USE THEREOF AS SOMATOSTATIN RECEPTOR LIGANDS

(54) Titre: 2-ARYLIMINO-2,3-DIHYDROTHIAZOLES ET LEUR UTILISATION COMME LIGANDS DES RECEPTEURS DE LA SOMATOSTATINE



(I)

(57) Abstract: The invention concerns novel 2-arylimino-2,3-dihydrothiazole derivatives of general formula (I), their preparation methods and their use as medicines, in particular for treating pathological conditions or diseases wherein one (or several) somatostatin receptors is/are involved. Said pathological conditions include in particular acromegaly, pituitary adenoma or endocrine gastroenteropancreatic tumours including the carcinoid syndrome, and gastrointestinal bleeding. In general formula (I), R1 represents in particular an alkyl, aralkyl, cyclohexyl radical optionally substituted by an amino radical or R1 represents a -C(R11)(R12)-CO-R10 radical wherein R11 represents H, R12 represents in particular H, carbocyclic or heterocyclic alkyl, cycloalkyl or aralkyl and R10 represents in particular an aminoalkylamino radical; R2 represents a carcyclic or heterocyclic aryl radical optionally substituted; R3 represents in particular COR5 or a carbocyclic or heterocyclic alkyl, adamantyl, aryl radical optionally substituted, carbocyclic or heterocyclic aralkyl optionally substituted on the aryl group; and R5 represents a radical fixed by a nitrogen atom to the group CO.

(57) Abrégé: L'invention a pour objet de nouveaux dérivés de 2-arylimino-2,3-dihydrothiazoles de formule générale (I), leurs procédés de préparation et leur utilisation en tant que médicaments, en particulier dans le traitement des états pathologiques ou des maladies dans lesquels un (ou plusieurs) des récepteurs de la somatostatine est (sont) impliqué(s). Ces états incluent en particulier l'acromégalie, les adénomes hypophysaires ou les tumeurs gastroentéropancréatiques endocriniennes dont le syndrome carcinoïde, et les saignements gastro-intestinaux. R1 représente notamment un radical alkyle, aralkyle ou cyclohexyle éventuellement substitué par un radical amino ou R1 représente un radical -C(R11)(R12)-CO-R10 dans lequel R11 représente H, R12 représente notamment H, alkyle, cycloalkyle ou aralkyle carbocyclique ou hétéocyclique et R10 représente notamment un radical aminoalkylamino; R2 représente un radical aryle carbocyclique ou hétérocyclique éventuellement substitué; R3 représente notamment COR5 ou un radical alkyle, adamantyle, aryle carbocyclique ou hétérocyclique éventuellement substitué, aralkyle carbocyclique ou hétérocyclique éventuellement substitué sur le groupe aryle; et R5 représente un radical fixé par un atome d'azote au groupe CO.

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En ce qui concerne les codes à deux lettres et autres abréviations, se référer aux "Notes explicatives relatives aux codes et abréviations" figurant au début de chaque numéro ordinaire de la Gazette du PCT.

2-ARYLIMINO-2,3-DIHYDROTHIAZOLES ET LEUR UTILISATION COMME LIGANDS DES RECEPTEURS DE LA SOMATOSTATINE

La présente demande a pour objet de nouveaux dérivés de 2-arylimino-2,3-dihydrothiazoles et leurs procédés de préparation. Ces produits ont une bonne affinité avec certains sous-types de récepteurs de la somatostatine et présentent donc d'intéressantes propriétés pharmacologiques. L'invention concerne également ces mêmes produits en tant que médicaments, des compositions pharmaceutiques les contenant et leur utilisation pour la préparation d'un médicament destiné à traiter les états pathologiques ou les maladies dans lesquels un (ou plusieurs) des récepteurs de la somatostatine est (sont) impliqué(s).

La somatostatine (SST) est un tétradécapeptide cyclique qui a été isolé pour la première fois de l'hypothalamus en tant que substance inhibitrice de l'hormone de croissance (Brazeau P. et al., *Science* 1973, **179**, 77-79). Elle intervient également en tant que neurotransmetteur dans le cerveau (Reisine T. et al., *Neuroscience* 1995, 67, 777-790 ; Reisine et al., *Endocrinology* 1995, **16**, 427-442). Le clonage moléculaire a permis de montrer que la bioactivité de la somatostatine dépend directement d'une famille de cinq récepteurs liés à la membrane.

L'hétérogénéité des fonctions biologiques de la somatostatine a conduit à des études pour essayer d'identifier les relations structure-activité des analogues peptidiques sur les récepteurs de la somatostatine, ce qui a amené la découverte de 5 sous-types de récepteurs (Yamada et al., *Proc. Natl. Acad. Sci. U.S.A*, **89**, 251-255, 1992 ; Raynor, K. et al, *Mol. Pharmacol.*, **44**, 385-392, 1993). Les rôles fonctionnels de ces récepteurs sont actuellement activement étudiés. Les affinités avec les différents sous-types de récepteurs de la somatostatine ont été associés au traitement des désordres / maladies suivants. L'activation des sous-types 2 et 5 a été associée à la suppression de l'hormone de croissance (GH) et plus particulièrement à celle des adénomes sécrétant GH (acromégalie) et de ceux sécrétant l'hormone TSH. L'activation du sous-type 2 mais pas du sous-type 5 a été associée au traitement des adénomes sécrétant la prolactine. D'autres indications associées avec l'activation des sous-types de récepteurs de la somatostatine sont la resténose, l'inhibition de la sécrétion d'insuline et/ou de glucagon

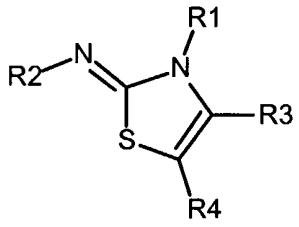
et en particulier le diabète mellitus, l'hyperlipidémie, l'insensiblité à l'insuline, le Syndrome X, l'angiopathie, la rétinopathie proliférative, le phénomène de Dawn et la néphropathie; l'inhibition de la sécrétion d'acide gastrique et en particulier les ulcères peptiques, les fistules entérocutanées et pancréaticocutanées, le syndrome du colon irritable, le syndrome de Dumping, le syndrome des diarrhées aqueuses, les diarrhées reliées au SIDA, les diarrhées induites par la chimiothérapie, la pancréatite aiguë ou chronique et les tumeurs gastrointestinales sécrétrices; le traitement du cancer comme les hépatomes; l'inhibition de l'angiogénèse, le traitement des désordres inflammatoires comme l'arthrite; le rejet chronique des allogreffes; l'angioplastie; la prévention des saignements des vaisseaux greffés et des saignements gastrointestinaux. Les agonistes de la somatostatine peuvent aussi être utilisés pour diminuer le poids d'un patient.

Parmi les désordres pathologiques associés à la somatostatine (Moreau J.P. et al., *Life Sciences*, 1987, **40**, 419 ; Harris A.G. et al., *The European Journal of Medicine*, **1993**, 2, 97-105), on peut donc citer par exemple : l'acromégalie, les adénomes hypophysaires, la maladie de Cushing, les gonadotrophinomes et les prolactinomes, les effets secondaires cataboliques des glucocorticoïdes, le diabète insulinodépendant, la rétinopathie diabétique, la néphropathie diabétique, l'hyperthyroïdie, le gigantisme, les tumeurs gastroentéropancréatiques endocriniennes dont le syndrome carcinoïde, le VIPome, l'insulinome, la nésidioblastose, l'hyperinsulinémie, le glucagonome, le gastrinome et le syndrome de Zollinger-Ellison, le GRFome ainsi que le saignement aigu des varices œsophagiennes, le reflux gastroœsophagien, le reflux gastroduodénal, la pancréatite, les fistules entérocutanées et pancréatiques mais aussi les diarrhées, les diarrhées réfractaires du syndrome d'immunodépression acquise, la diarrhée chronique sécrétoire, la diarrhée associée avec le syndrome de l'intestin irrité, les troubles liés au peptide libérateur de gastrine, les pathologies secondaires aux greffes intestinales, l'hypertension portale ainsi que les hémorragies des varices chez des malades avec cirrhose, l'hémorragie gastro-intestinale, l'hémorragie de l'ulcère gastroduodénale, la maladie de Crohn, les scléroses systémiques, le dumping syndrome, le syndrome du petit intestin, l'hypotension, la sclérodermie et le carcinome thyroïdien médullaire, les maladies liées à l'hyperprolifération cellulaire comme les cancers et plus particulièrement le cancer du sein, le cancer de la prostate, le cancer thyroïdien ainsi que le cancer pancréatique et le cancer colorectal, les fibroses et plus particulièrement la fibrose du rein, la fibrose du foie, la fibrose du poumon, la fibrose de la peau, également la fibrose du système nerveux central ainsi que celle du nez et la fibrose induite par la chimiothérapie, et d'autres domaines thérapeutiques comme, par exemple, les céphalées y compris les céphalées associées aux tumeurs hypophysaires, les douleurs, les accès de panique, la chimiothérapie, la cicatrisation des plaies, l'insuffisance rénale résultant

d'un retard de croissance, l'obésité et retard de croissance lié à l'obésité, le retard de croissance utérin, la dysplasie du squelette, le syndrome de Noonan, le syndrome d'apnée du sommeil, la maladie de Graves, la maladie polykystique des ovaires, les pseudokystes pancréatiques et ascites, la leucémie, le méningiome, la cachexie cancéreuse, l'inhibition des H pylori, le psoriasis ainsi que la maladie d'Alzheimer. On peut également citer l'ostéoporose.

La déposante a trouvé que les composés de formule générale **(I)** décrits ci-après présentaient une affinité et une sélectivité pour les récepteurs de la somatostatine. Comme la somatostatine et ses analogues peptidiques ont souvent une mauvaise biodisponibilité par voie orale et une faible sélectivité (Robinson, C., *Drugs of the Future*, 1994, **19**, 992; Reubi, J.C. et al., *TIPS*, 1995, **16**, 110), lesdits composés, agonistes ou antagonistes non-peptidiques de la somatostatine, peuvent être avantageusement utilisés pour traiter les états pathologiques ou les maladies tels que présentés ci-dessus et dans lesquels un (ou plusieurs) des récepteurs de la somatostatine est (sont) impliqué(s). De manière préférentielle, lesdits composés peuvent être utilisés pour le traitement de l'acromégalie, des adénomes hypophysaires ou des tumeurs gastroentéropancréatiques endocriniennes dont le syndrome carcinoïde.

Les composés de la présente invention répondent à la formule générale **(I)**



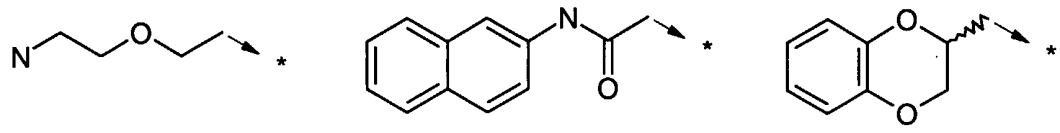
(I)

sous forme racémique, d'énantiomère ou toutes combinaisons de ces formes, dans laquelle :

R1 représente un radical amino(C_2-C_7)alkyle, aminoalkylarylalkyle, aminoalkylcycloalkylalkyle, (C_1-C_{15})alkyle, (C_3-C_7)cycloalkyle, (C_1-C_6)alkyl(C_3-C_6)cycloalkyle, (C_3-C_6)cycloalkylalkyle, cyclohexénylalkyle, alkényle, alkynyle, aryle carbocyclique comptant au moins deux cycles dont l'un au moins n'est pas aromatique, aralkyle carbocyclique ou hétérocyclique éventuellement substitué sur le groupe aryle, *bis*-arylalkyle, alkoxyalkyle, furannylalkyle, tétrahydrofurannylalkyle, dialkylaminoalkyle, N-acétamidoalkyle, cyanoalkyle, alkylthioalkyle, arylhydroxyalkyle, aralkoxyalkyle, morpholinoalkyle,

pyrrolidinoalkyle, pipéridinoalkyle, N-alkylpyrrolidinoalkyle, N-alkylpipérazinylalkyle ou oxopyrrolidinoalkyle,

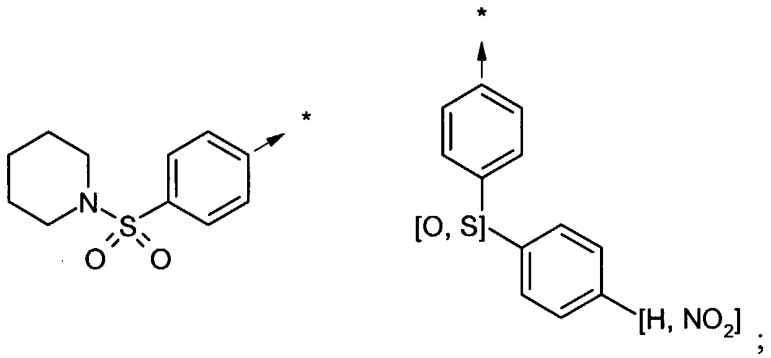
ou R1 représente l'un des radicaux représentés ci-dessous :



ou encore R1 représente un radical -C(R11)(R12)-CO-R10 ;

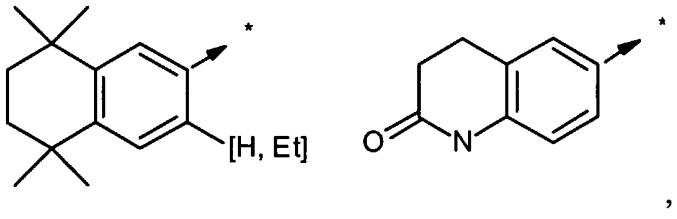
R2 représente un radical aryle carbocyclique ou hétérocyclique éventuellement substitué,

ou bien R2 représente l'un des radicaux représentés ci-dessous :



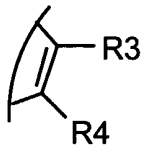
R3 représente un radical alkyle, adamantyle, aryle carbocyclique ou hétérocyclique éventuellement substitué, aralkyle carbocyclique ou hétérocyclique éventuellement substitué sur le groupe aryle,

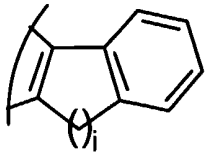
ou R3 représente l'un des radicaux représentés ci-dessous :



ou encore R3 représente un radical -CO-R5 ;

R4 représente H, alkyle, aralkyle carbocyclique ou hétérocyclique éventuellement situé sur le radical aryle ;

ou alors le radical 

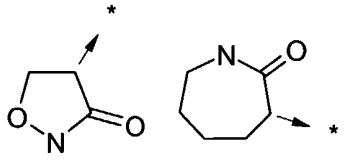
représente un radical de formule générale 

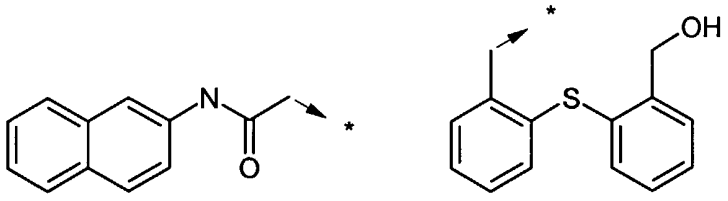
dans laquelle i représente un entier de 1 à 3 ;

R5 représente le radical N(R6)(R7) ;

R6 représente un radical (C_1-C_{16})alkyle, cycloalkylalkyle, hydroxyalkyle, aryloxyalkyle, aralkyle carbocyclique ou hétérocyclique éventuellement substitué sur le groupe aryle, aralkoxyalkylke, arylhydroxyalkyle, alkoxyalkyle, alkylthioalkyle, alkényle, alkynyle, cyclohexényle, cyclohexénylalkyle, alkylthiohydroxyalkyle, cyanoalkyle,
N-acétamidoalkyle, bis-arylalkyle éventuellement substitué sur les groupes aryle, di-arylalkyle éventuellement substitué sur les groupes aryle, morpholinoalkyle, pyrrolidinoalkyle, pipéridinoalkyle, N-alkylpyrrolidinoalkyle, oxopyrrolidinoalkyle, tétrahydrofurannylalkyle, N-benzylpyrrolidinoalkyle, N-alkylpipérazinylalkyle, N-benzylpipérazinylalkyle, N-benzylpipéridinylalkyle ou N-alkoxycarbonylpipéridinyle, ou R6 représente un radical (C_3-C_8)cycloalkyle éventuellement substitué par un radical choisi parmi le groupe composé du radical hydroxy et d'un radical alkyle,

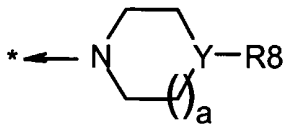
ou bien R6 représente l'un des radicaux représentés ci-dessous :





R7 représente H ou un radical alkyle, hydroxyalkyle, mono- ou di-aminoalkyle ou aralkyle ;

ou encore le radical -N(R6)(R7) représente le radical de formule générale suivante :



dans laquelle :

R8 représente H, alkyle, hydroxyalkyle, aryle carbocyclique ou hétérocyclique éventuellement substitué, aralkyle éventuellement substitué sur le groupe aryle, alkényle, alkoxyalkyle, cycloalkyle, cycloalkylalkyle, bis-arylalkyle, pipéridinyle, pyrrolidinyle, hydroxy, arylalkényle,

ou R8 représente -X-$(CH_2)_b$-R9 ;

R9 représente H ou un radical alkyle, alkoxy, aryloxy, aryle carbocyclique ou hétérocyclique éventuellement substitué, morpholinyle, pyrrolidinyle, alkylamino ou N,N'-(alkyl)(aryl)amino ;

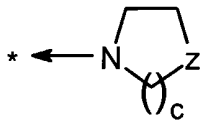
X représente CO, CO-NH ou SO_2 ;

Y représente CH ou N ;

a représente 1 ou 2 ;

b représente un entier de 0 à 6 ;

ou le radical N(R6)(R7) représente un radical de formule générale

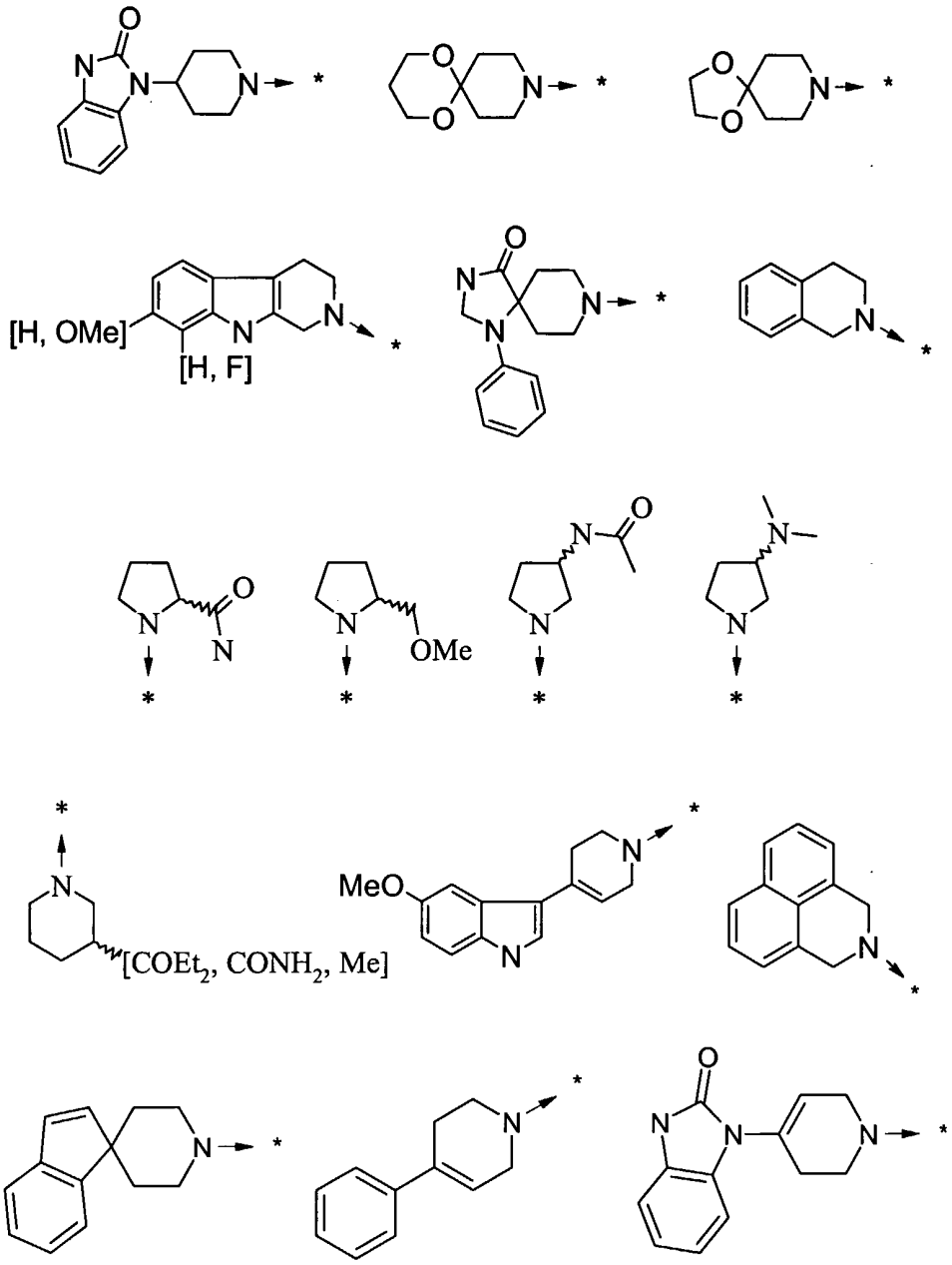


dans laquelle :

Z représente CH, O ou S ;

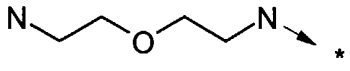
c représente un entier de 0 à 4 ;

ou encore le radical N(R6)(R7) représente l'un des radicaux représentés ci-dessous :



R10 représente un radical amino(C_2-C_7)alkylamino, ((aminoalkyl)aryl)alkylamino, ((aminoalkyl)cycloalkyl)alkylamino, pipérazinyle, homopipérazinyle,

ou R10 représente le radical représenté ci-dessous :



;

R11 représente H ;

R12 représente H ou un radical alkyle, (C_3-C_7)cycloalkyle, aralkyle carbocyclique ou hétérocyclique éventuellement substitué, propargyle, allyle, hydroxyalkyle, alkylthioalkyle, arylalkylalkoxyalkyle, arylalkylthioalkoxyalkyle ;

ou les composés de l'invention seront des sels des composés de formule générale **(I)**.

Lorsque les composés de formule générale **(I)** comprendront des radicaux R1, R2, R3, R4, R6, R8, R9 ou R12 incluant un radical aryle substitué ou aralkyle substitué sur le groupe aryle, lesdits radicaux aryle ou aralkyle seront de préférence tels que :

- Pour R1, lorsque le groupe aryle est substitué, il peut l'être de 1 à 5 fois (outre la liaison qui le relie au reste de la molécule) par des radicaux choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle, alkoxy, alkylthio, haloalkyle, haloalkoxy, aryle, aralkoxy ou SO_2NH_2. Le cas échéant, deux substituants peuvent être reliés entre eux et former un cycle, par exemple en représentant ensemble un radical méthylènedioxy ou propylène.

- Pour R2, lorsque le groupe aryle est substitué, il peut l'être de 1 à 5 fois (outre la liaison qui le relie au reste de la molécule). Le radical aryle peut être substitué par des radicaux choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle, alkoxy, alkylthio, haloalkyle, alkényle, haloalkoxy, nitro, cyano, azido, SO_2N, mono- ou di-alkylamino, aminoalkyle, aralkoxy ou aryle. Le cas échéant, deux substituants peuvent être reliés entre eux et former un cycle, par exemple en représentant ensemble un radical méthylènedioxy, éthylènedioxy ou propylène.

- Pour R3, lorsque le(s) groupe(s) aryle(s) (provenant d'un radical aryle ou aralkyle) est (sont) substitué(s), il(s) peu(ven)t l'être, selon le cas, de 1 à 5 fois (outre la liaison qui le(s) relie au reste de la molécule). Les radicaux aryle ou aralkyle carbocycliques peuvent être substitués de 1 à 5 fois sur le noyau aryle par des radicaux choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle, hydroxy, alkoxy, haloalkyle, haloalkoxy, nitro, cyano, azido, mono- ou di-alkylamino, pyrrolidinyle, morpholinyle, aralkoxy ou aryle. Le cas échéant, deux substituants peuvent être reliés entre eux et former un cycle, par exemple en représentant ensemble un radical alkylènedioxy comptant de 1 à 3 atomes de carbone. Les radicaux aryle ou aralkyle hétérocycliques de R3 peuvent être substitués de 1 à 2 fois sur le noyau par des radicaux choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle.

- Pour R4, lorsque le groupe aryle est substitué, il peut l'être de 1 à 5 fois (outre la liaison qui le relie au reste de la molécule). Le radical aryle peut être substitué par des

radicaux choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle ou alkoxy.

- Pour R6, lorsque le(s) groupe(s) aryle(s) est (sont) substitué(s), il(s) peu(ven)t l'être de 1 à 5 fois (outre la liaison qui le(s) relie au reste de la molécule). Les substituants éventuels sur les groupes aryle sont choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle, alkoxy, alkylthio, haloalkyle, haloalkoxy, aryle, aryloxy ou SO_2NH_2.

- Pour R8, lorsque le(s) groupe(s) aryle(s) est (sont) substitué(s), il(s) peu(ven)t l'être de 1 à 5 fois (outre la liaison qui le(s) relie au reste de la molécule). Les substituants éventuels sur les groupes aryle sont choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle, haloalkyle, alkoxy, hydroxy, cyano, nitro ou alkylthio.

- Pour R9, lorsque le radical aryle carbocyclique ou hétérocyclique est substitué, il peut l'être de 1 à 5 fois (outre la liaison qui le relie au reste de la molécule). Les substituants éventuels sur le groupe aryle sont choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle, haloalkyle, alkoxy, haloalkoxy, alkylthio, aryle carbocyclique, hydroxy, cyano ou nitro.

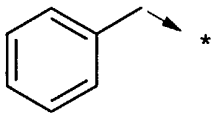
- Pour R12, lorsque le radical aryle carbocyclique ou hétérocyclique est substitué, il peut l'être de 1 à 5 fois (outre la liaison qui le relie au reste de la molécule). Les substituants éventuels sur le groupe aryle sont choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle, alkoxy, aryle carbocyclique, aralkoxy, hydroxy, cyano ou nitro.

Par alkyle, lorsqu'il n'est pas donné plus de précision, on entend un radical alkyle linéaire ou ramifié comptant de 1 à 6 atomes de carbone. Par cycloalkyle, lorsqu'il n'est pas donné plus de précision, on entend un système monocyclique carboné comptant de 3 à 7 atomes de carbone. Par alkényle, lorsqu'il n'est pas donné plus de précision, on entend un radical alkyle linéaire ou ramifié comptant de 1 à 6 atomes de carbone et présentant au moins une insaturation (double liaison). Par alkynyle, lorsqu'il n'est pas donné plus de précision, on entend un radical alkyle linéaire ou ramifié comptant de 1 à 6 atomes de carbone et présentant au moins une double insaturation (triple liaison). Par aryle carbocyclique ou hétérocyclique, on entend un système carbocyclique ou hétérocyclique comprenant au moins un cycle aromatique, un système étant dit hétérocyclique lorsque l'un au moins des cycles qui le composent comporte un hétéroatome (O, N ou S). Par haloalkyle, on entend un radical alkyle dont au moins l'un des atomes d'hydrogène (et éventuellement tous) est remplacé par un atome halogène.

Par radicaux alkylthio, alkoxy, haloalkyle, haloalkoxy, aminoalkyle, alkényle, alkynyle et aralkyle, on entend respectivement les radicaux alkylthio, alkoxy, haloalkyle, haloalkoxy, aminoalkyle, alkényle, alkynyle et aralkyle dont le radical alkyle a la signification indiquée précédemment.

Par alkyle linéaire ou ramifié ayant de 1 à 6 atomes de carbone, on entend en particulier les radicaux méthyle, éthyle, propyle, isopropyle, butyle, isobutyle, sec-butyle et tert-butyle, pentyle, néopentyle, isopentyle, hexyle, isohexyle. Par cycloalkyle, on entend en particulier les radicaux cyclopropanyle, cyclobutanyle, cyclopentanyle, cyclohexyle et cycloheptanyle. Par aryle carbocyclique ou hétérocyclique, on entend notamment les radicaux phényle, naphtyle, pyridinyle, furannyle, thiophènyle, indanyle, indolyle, imidazolyle, benzofurannyle, benzothiophènyle, phtalimidyle. Par aralkyle carbocyclique ou hétérocyclique, on entend notamment les radicaux benzyle, phényléthyle, phénylpropyle, phénylbutyle, indolylalkyle, phtalimidoalkyle, naphtylalkyle, furannylalkyle, thiophénylalkyle, benzothiophénylalkyle, pyridinylalkyle et imidazolylalkyle.

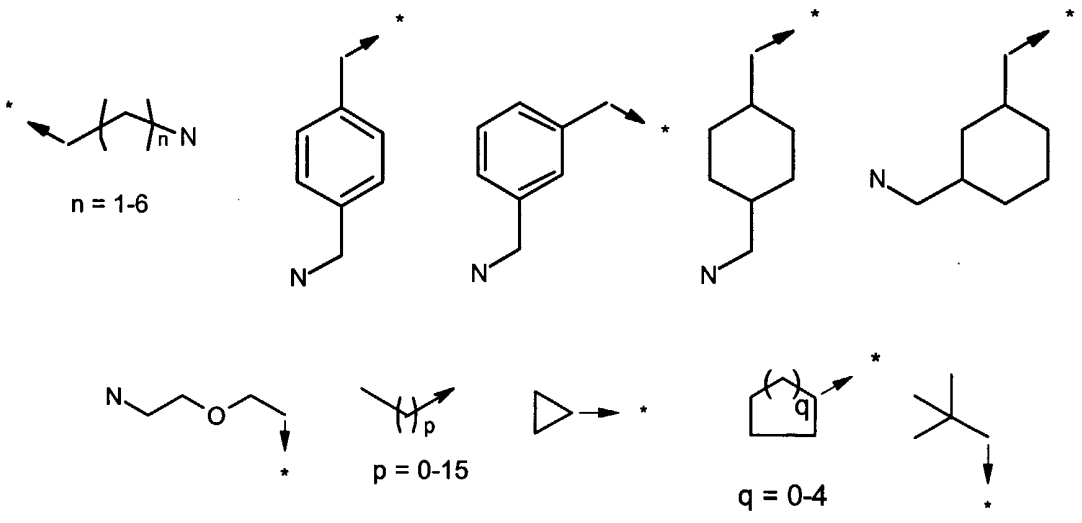
Lorsqu'il émane une flèche d'une structure chimique, ladite flèche indique le point d'attache. Par exemple :

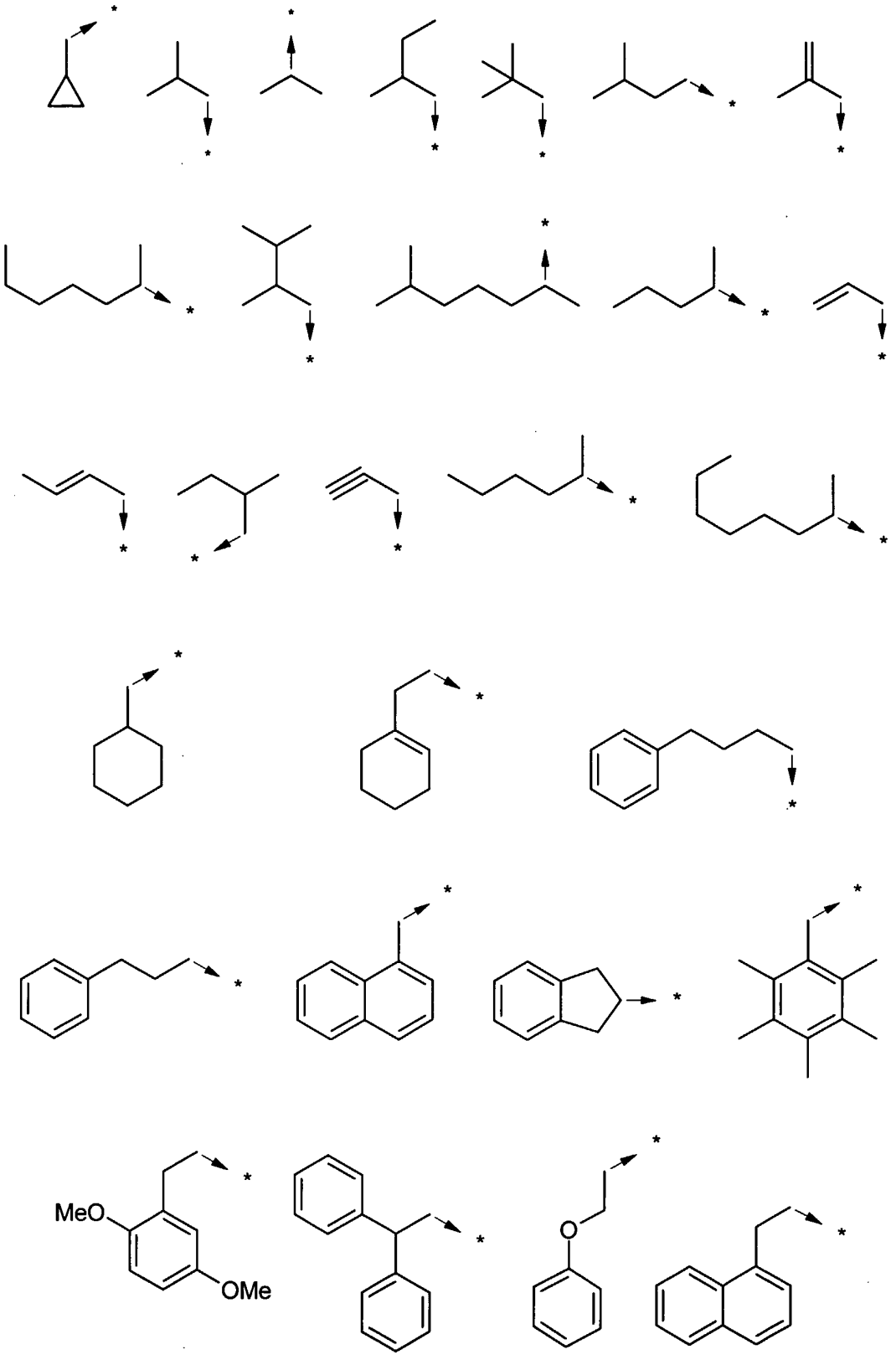


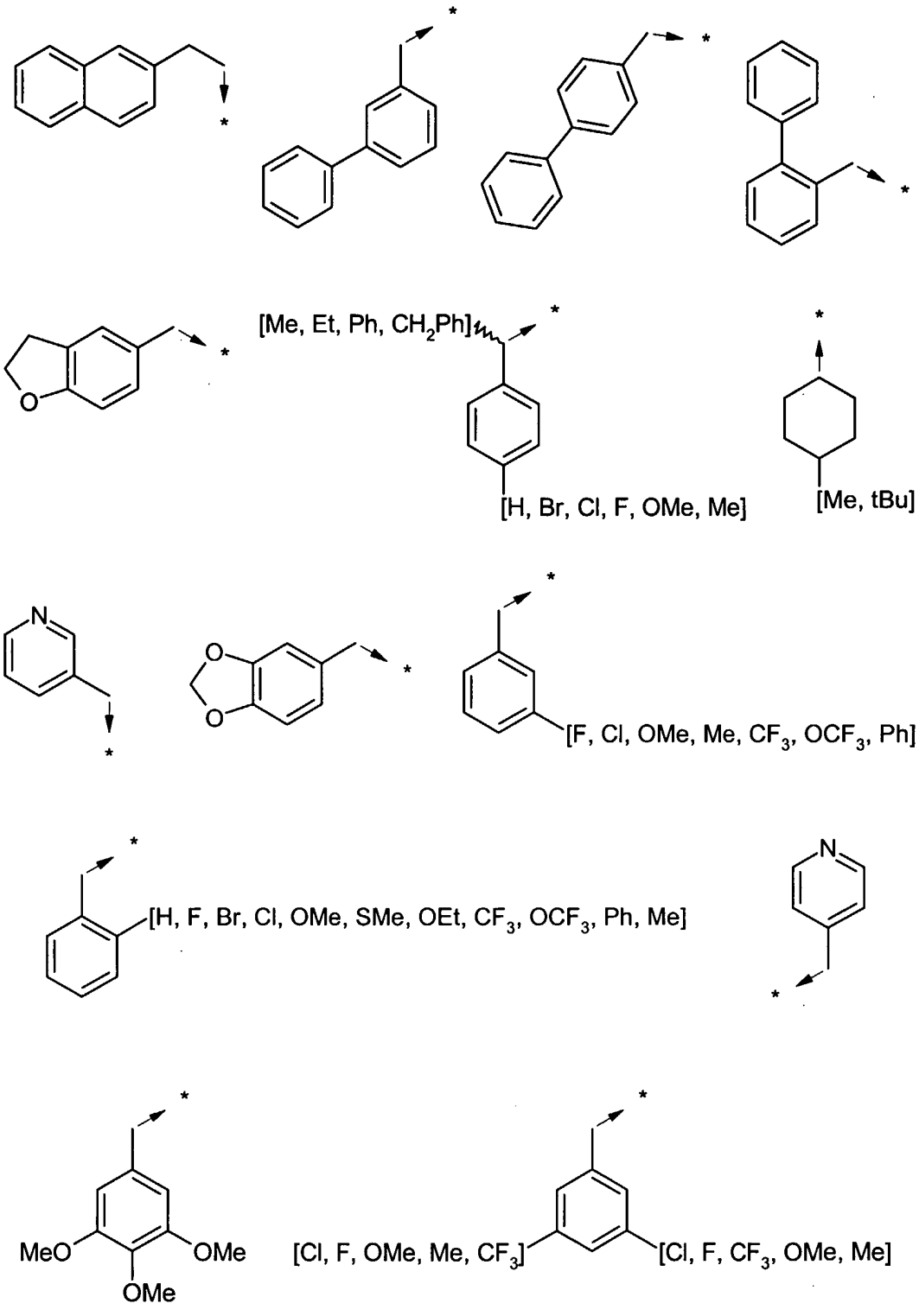
représente le radical benzyle.

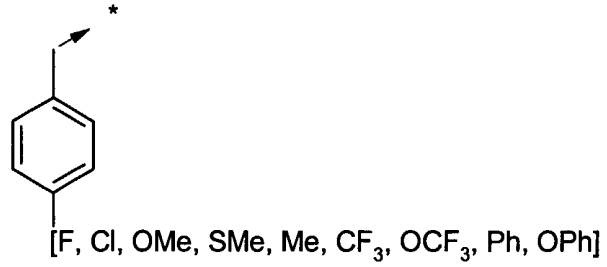
De préférence, les composés de formule générale **(I)** seront tels que :

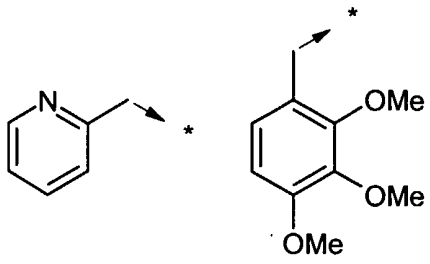
R1 représente -C(R11)(R12)-CO-R10 ou l'un des radicaux suivants :

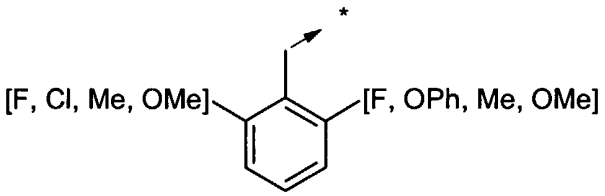


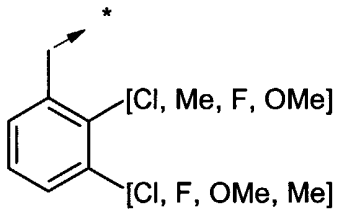

MeO
OMe
O

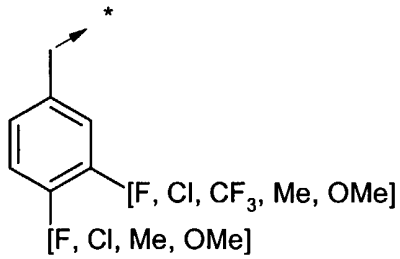

[Me, Et, Ph, CH2Ph]
[H, Br, Cl, F, OMe, Me]
[Me, tBu]
[F, Cl, OMe, Me, CF3, OCF3, Ph]
[H, F, Br, Cl, OMe, SMe, OEt, CF3, OCF3, Ph, Me]
MeO
OMe
OMe
[Cl, F, OMe, Me, CF3]
[Cl, F, CF3, OMe, Me]

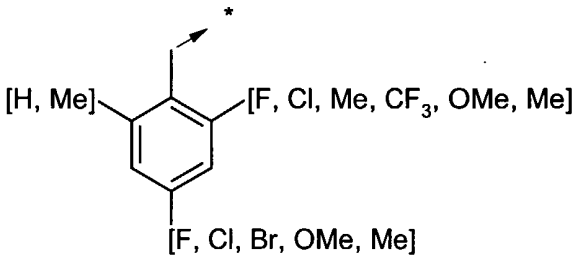

[F, Cl, OMe, SMe, Me, CF3, OCF3, Ph, OPh]

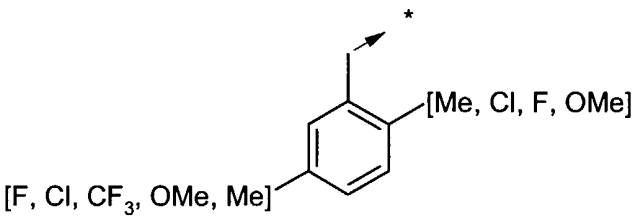

OMe
OMe
OMe

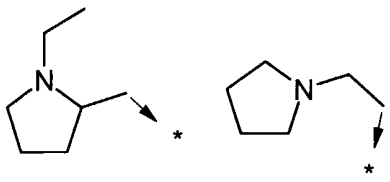

[F, Cl, Me, OMe]
[F, OPh, Me, OMe]

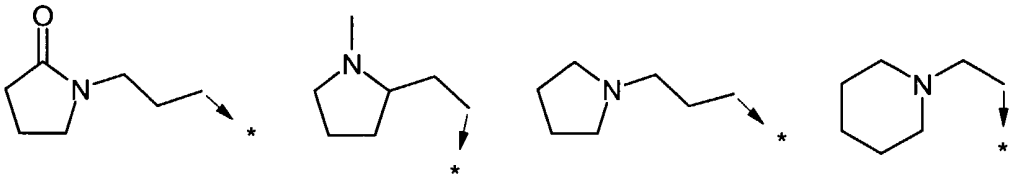

[Cl, Me, F, OMe]
[Cl, F, OMe, Me]

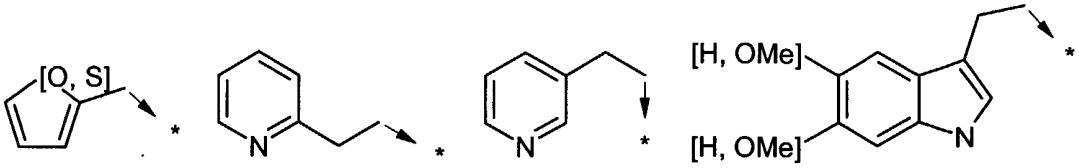

[F, Cl, CF3, Me, OMe]
[F, Cl, Me, OMe]

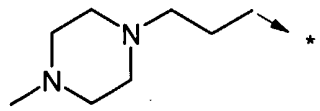

[H, Me]
[F, Cl, Me, CF3, OMe, Me]
[F, Cl, Br, OMe, Me]

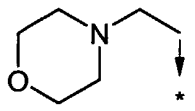

[Me, Cl, F, OMe]
[F, Cl, CF3, OMe, Me]

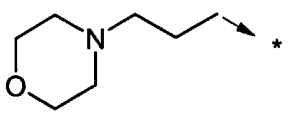


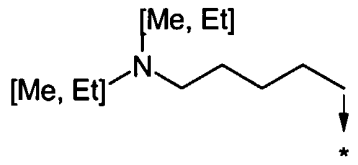


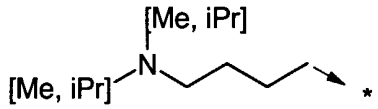

[O, S]
[H, OMe]
[H, OMe]

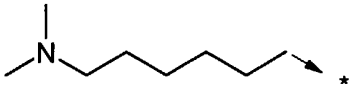


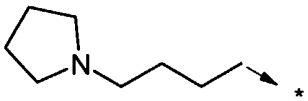


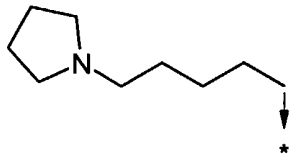


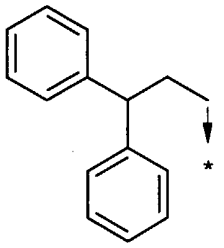


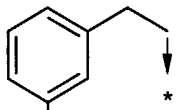




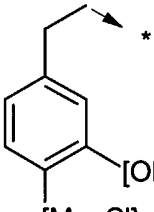






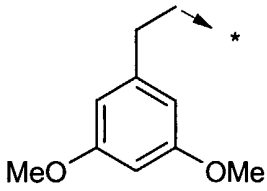


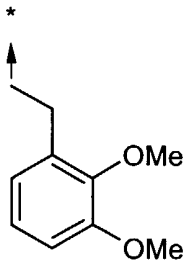
[OMe, CF_3, OEt, F, Cl, Me]

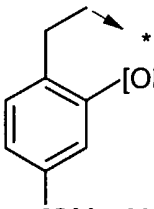


[OMe, OEt, Br, Me, Cl]

[Me, Cl]

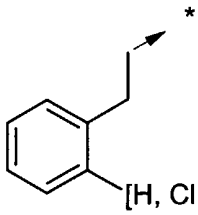




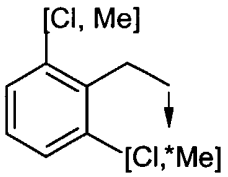


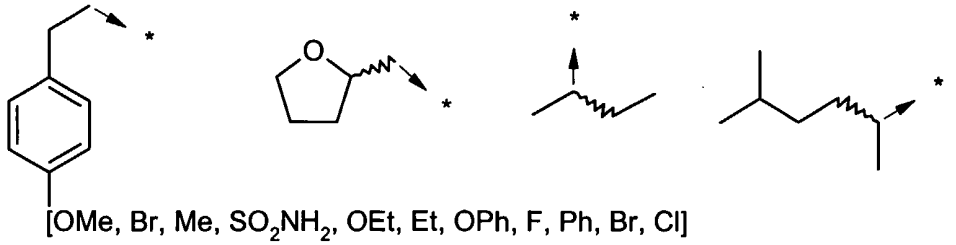
[OMe, Me, Cl]

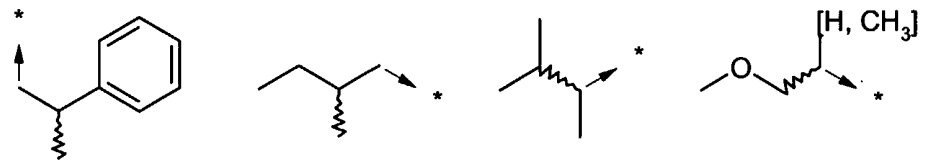
[OMe, Me, Cl]

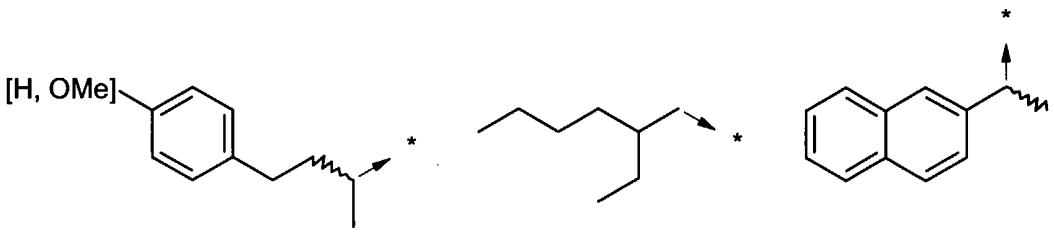


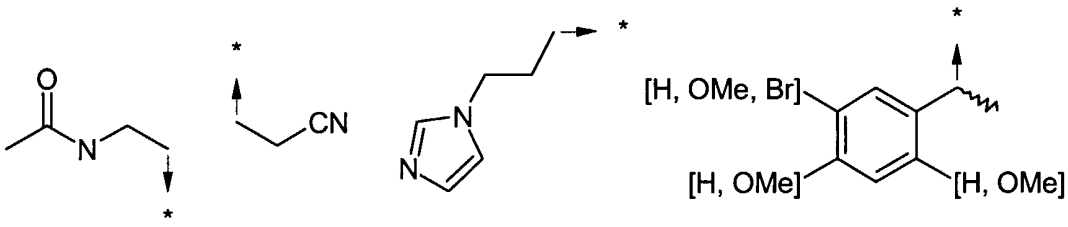
[H, Cl, OMe, OEt, Me, OPh]

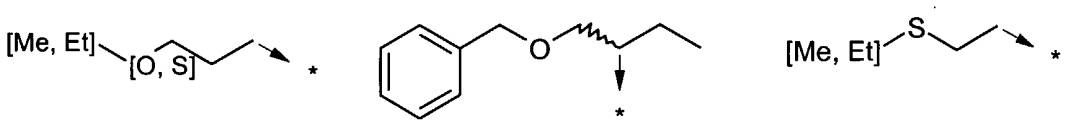


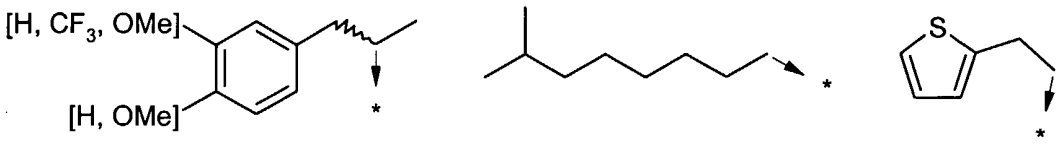

[OMe, Br, Me, SO_2NH_2, OEt, Et, OPh, F, Ph, Br, Cl]

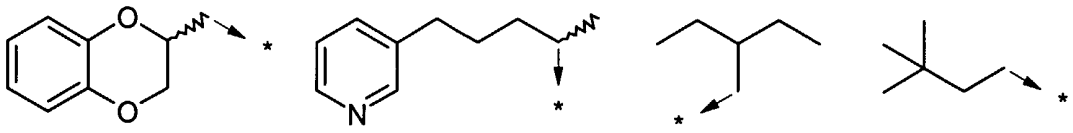

[H, CH_3]

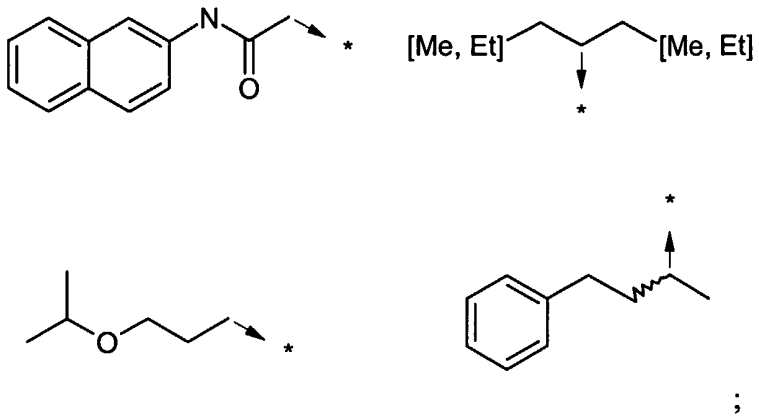

[H, OMe]


CN
[H, OMe, Br]
[H, OMe]
[H, OMe]


[Me, Et]
[O, S]
[Me, Et]

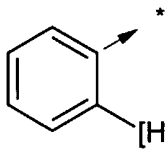

[H, CF_3, OMe]
[H, OMe]



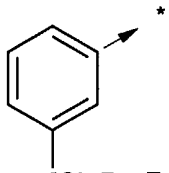


;

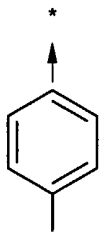
R2 représente l'un des radicaux suivants :



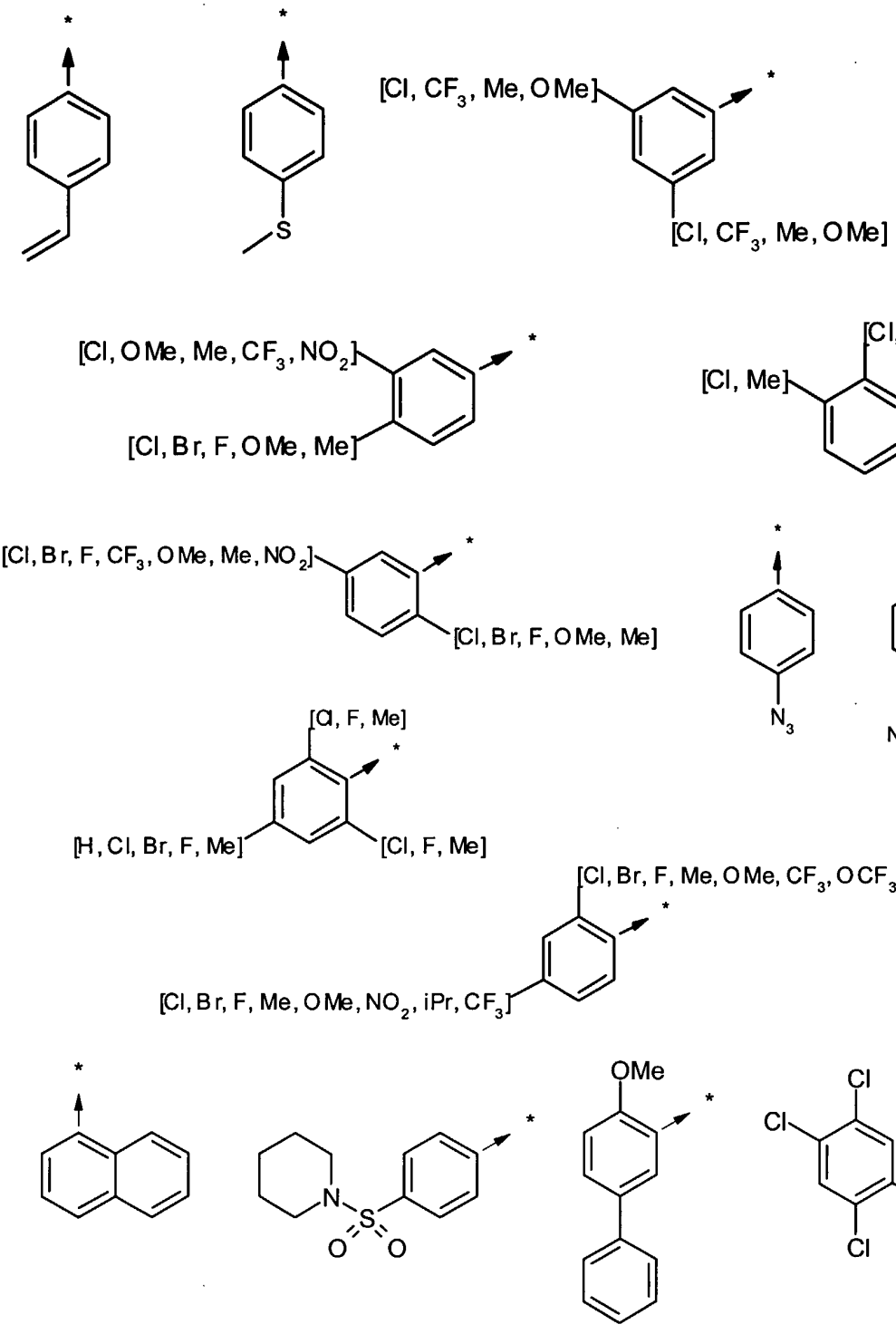
[H, Cl, Br, F, I, OMe, SMe, OEt, CF_3, OCF_3, NO_2, CN, Me, Et, iPr, Ph]

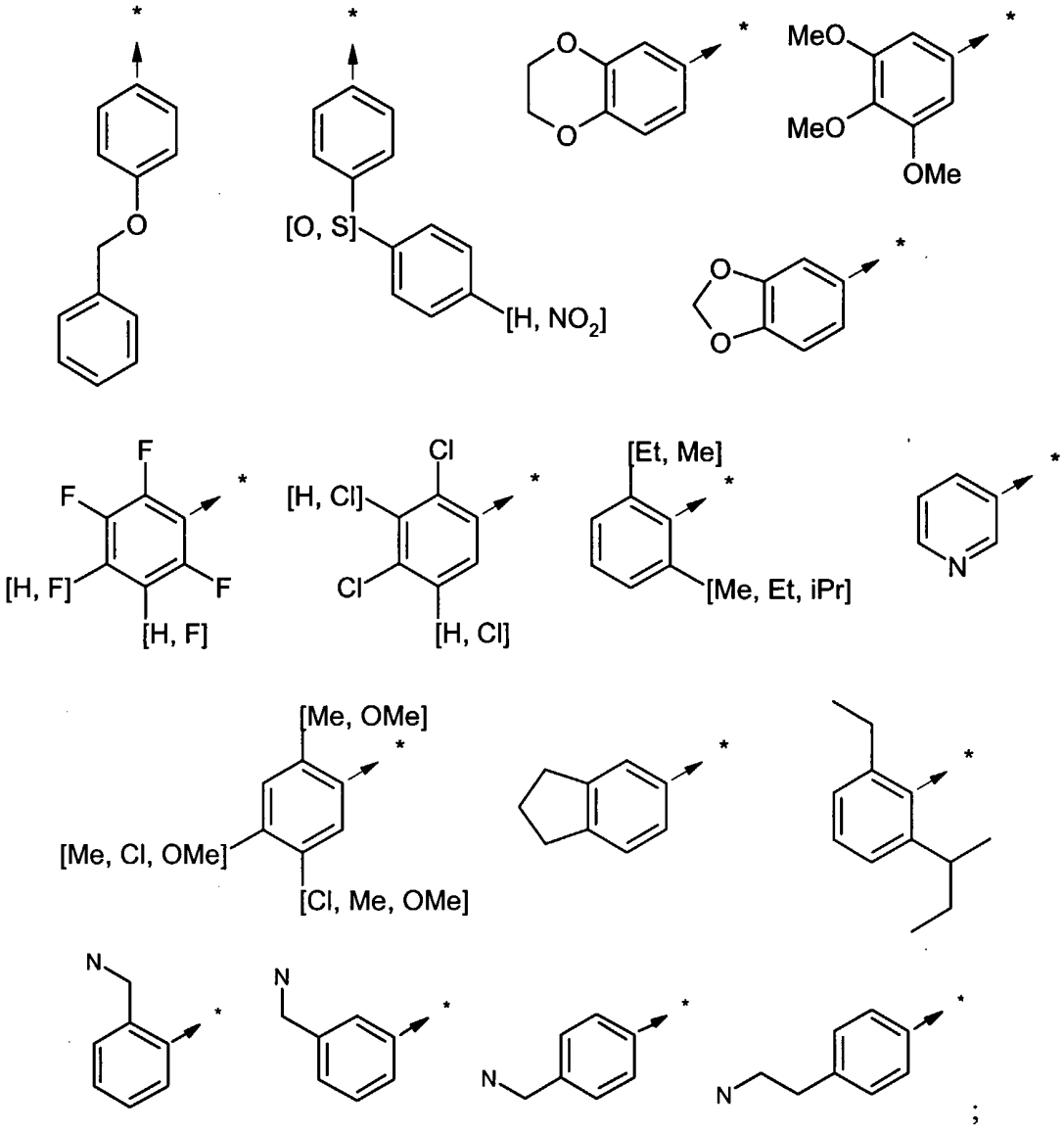


[Cl, Br, F, I, OMe, SMe, CF_3, OCF_3, NO_2, CN, Me, Et, iPr, OCH_2Ph]



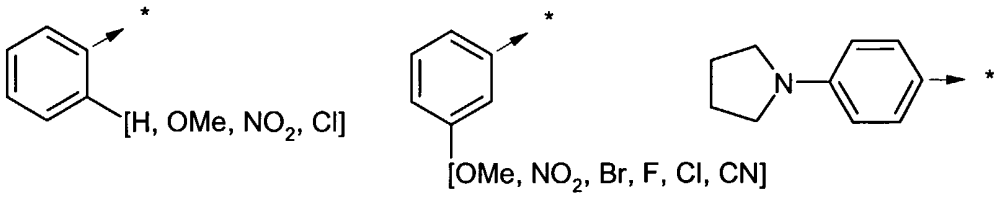
[Cl, Br, F, I, OMe, OEt, CF_3, OCF_3, NO_2, CN, Me, Et, iPr, nBu, tBu, NMe_2, NEt_2]

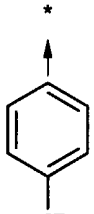

[Cl, CF3, Me, OMe]
[Cl, CF3, Me, OMe]
[Cl, OMe, Me, CF3, NO2]
[Cl, Br, F, OMe, Me]
[Cl, Me]
[Cl, Me]
[Cl, Br, F, CF3, OMe, Me, NO2]
[Cl, Br, F, OMe, Me]
N3
[Cl, F, Me]
[H, Cl, Br, F, Me]
[Cl, F, Me]
[Cl, Br, F, Me, OMe, CF3, OCF3, NO2]
[Cl, Br, F, Me, OMe, NO2, iPr, CF3]
OMe
Cl
Cl
Cl
Cl



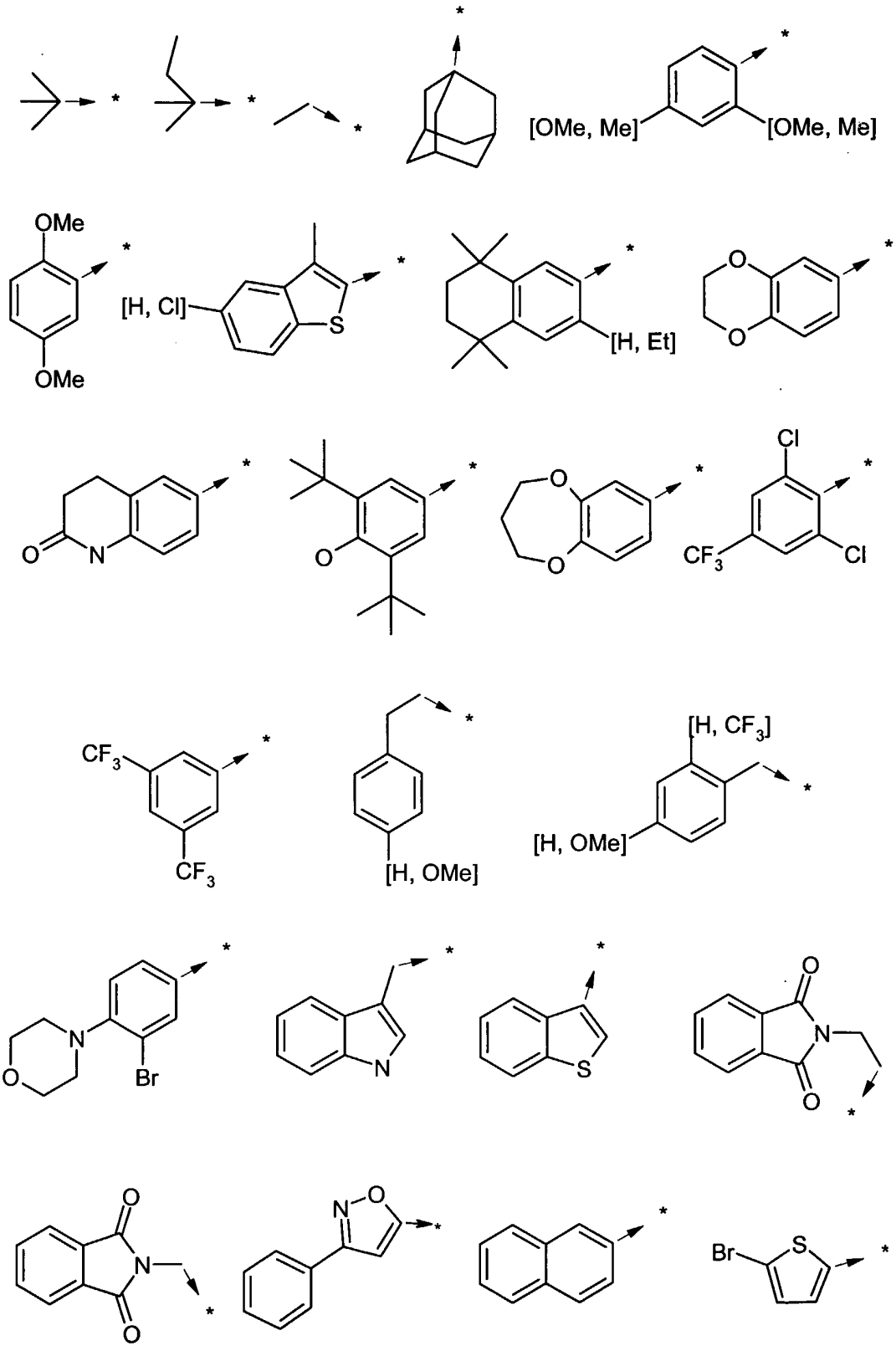
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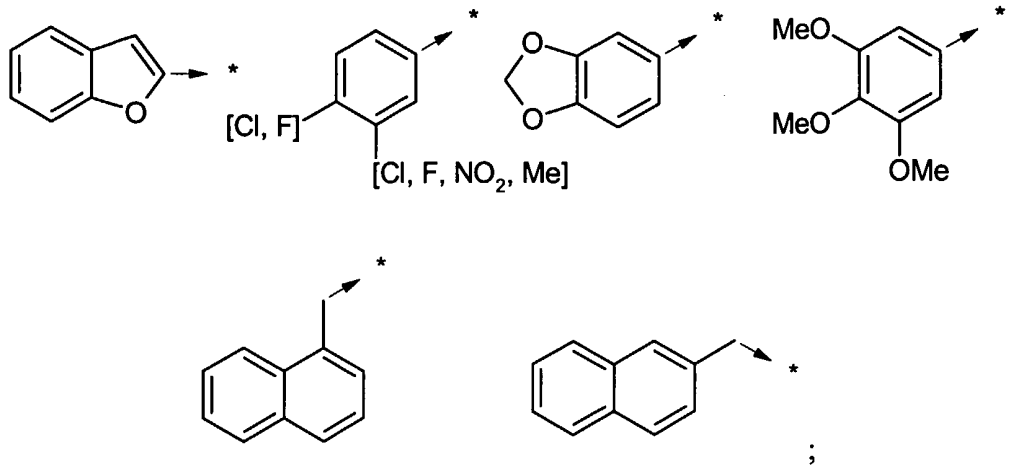
R3 représente CO-R5 ou l'un des radicaux suivants :





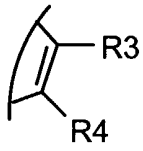
[Br, Cl, F, OMe, Ph, Me, NO_2, N_3, OCF_3, CN, CF_3, NEt_2, nC_4H_9, nC_5H_{11}, OCH_2Ph]

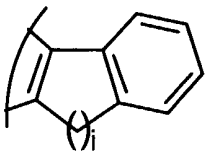

[OMe, Me]
[OMe, Me]
OMe
OMe
[H, Cl]
S
[H, Et]
O
O
O
N
O
O
O
CF3
Cl
Cl
CF3
CF3
[H, OMe]
[H, CF3]
[H, OMe]
N
Br
O
N
S
O
N
O
O
N
O
N
O
Br
S



;

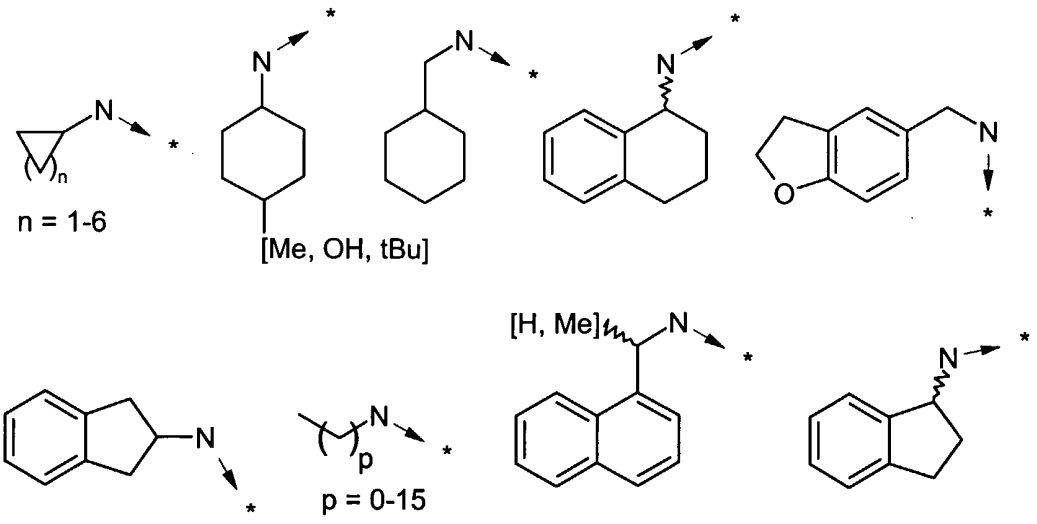
R4 représente H, alkyle, aralkyle carbocyclique ou hétérocyclique éventuellement substitué sur le radical aryle ;

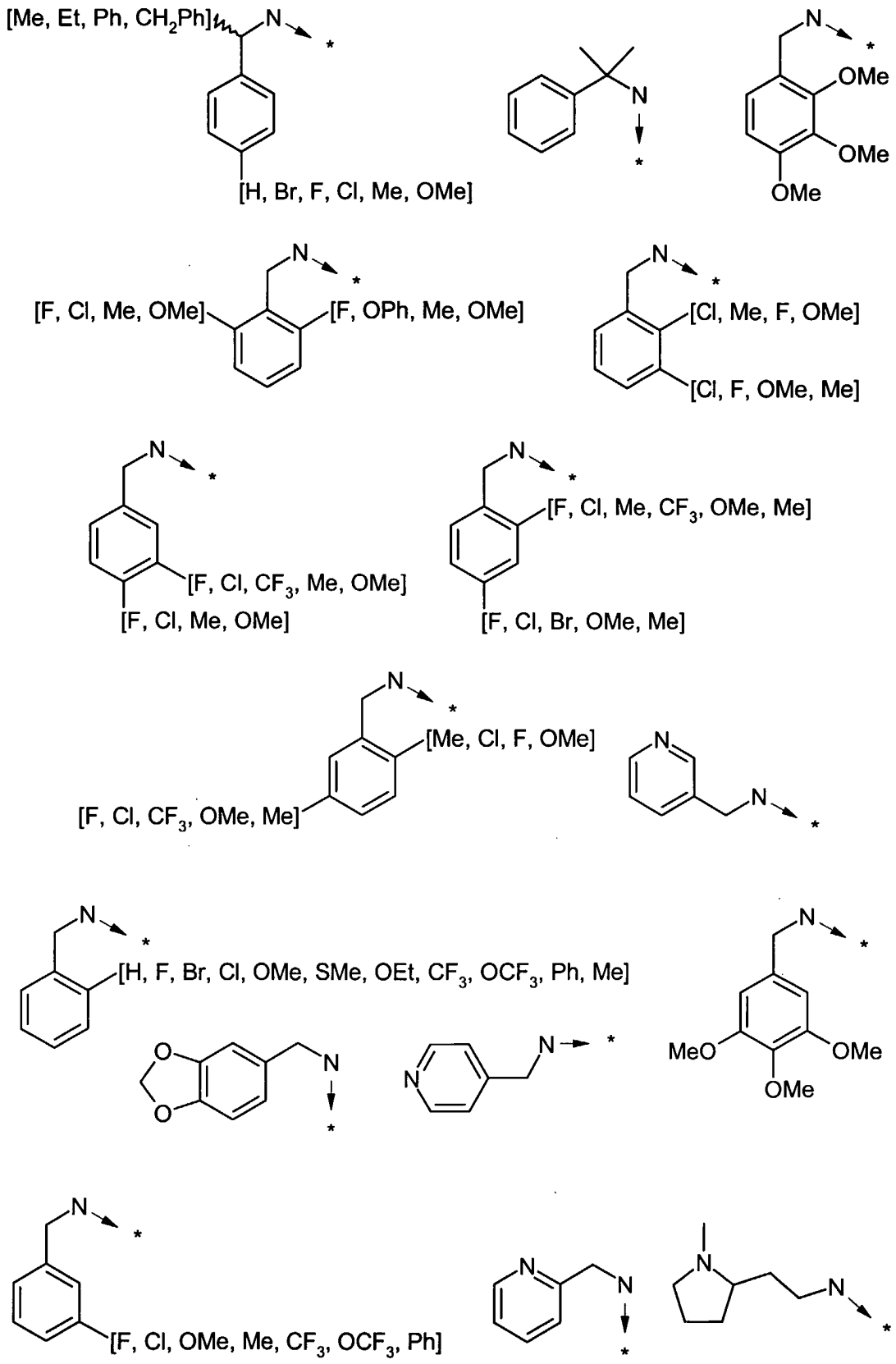
ou alors le radical 

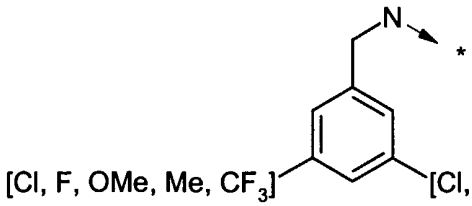
représente un radical de formule générale 

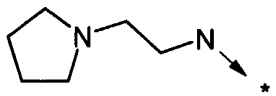
dans laquelle i représente un entier de 1 à 3 ;

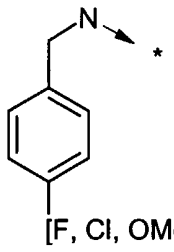
R5 représente l'un des radicaux suivants :

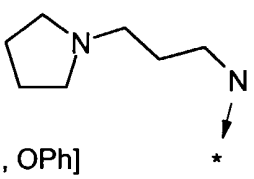


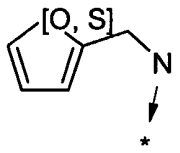

[Me, Et, Ph, CH2Ph]
N
*
[H, Br, F, Cl, Me, OMe]
OMe
OMe
OMe
[F, Cl, Me, OMe]
[F, OPh, Me, OMe]
[Cl, Me, F, OMe]
[Cl, F, OMe, Me]
[F, Cl, CF3, Me, OMe]
[F, Cl, Me, OMe]
[F, Cl, Me, CF3, OMe, Me]
[F, Cl, Br, OMe, Me]
[Me, Cl, F, OMe]
[F, Cl, CF3, OMe, Me]
[H, F, Br, Cl, OMe, SMe, OEt, CF3, OCF3, Ph, Me]
O
MeO
[F, Cl, OMe, Me, CF3, OCF3, Ph]

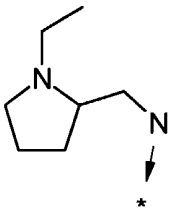

N
*
[Cl, F, OMe, Me, CF3]
[Cl, F, CF3, OMe, Me]

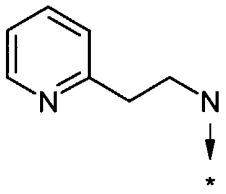

N
N
*

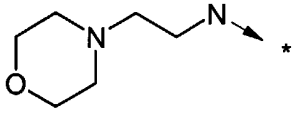

N
*
[F, Cl, OMe, SMe, Me, CF3, OCF3, Ph, OPh]

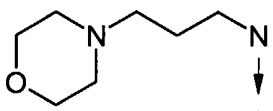

N
N
*

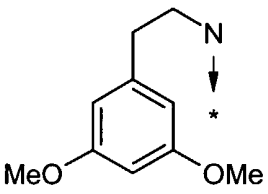

[O, S]
N
*

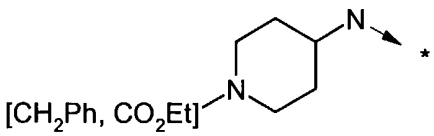

N
N
*

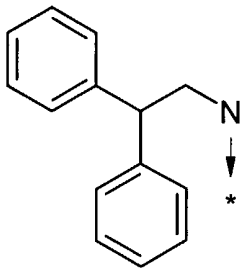

N
N
*

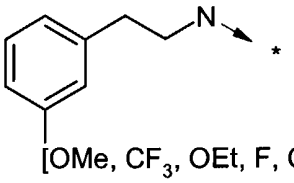

N
N
O
*

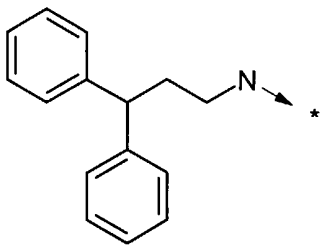

N
N
O
*

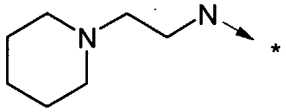

N
*
MeO
OMe

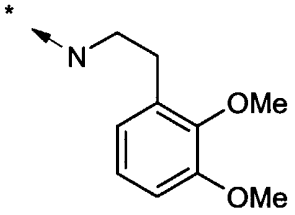

N
*
[CH2Ph, CO2Et]
N

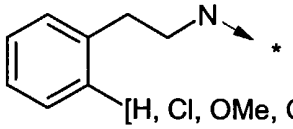

N
*

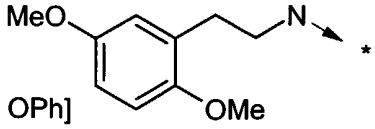

N
*
[OMe, CF3, OEt, F, Cl, Me]

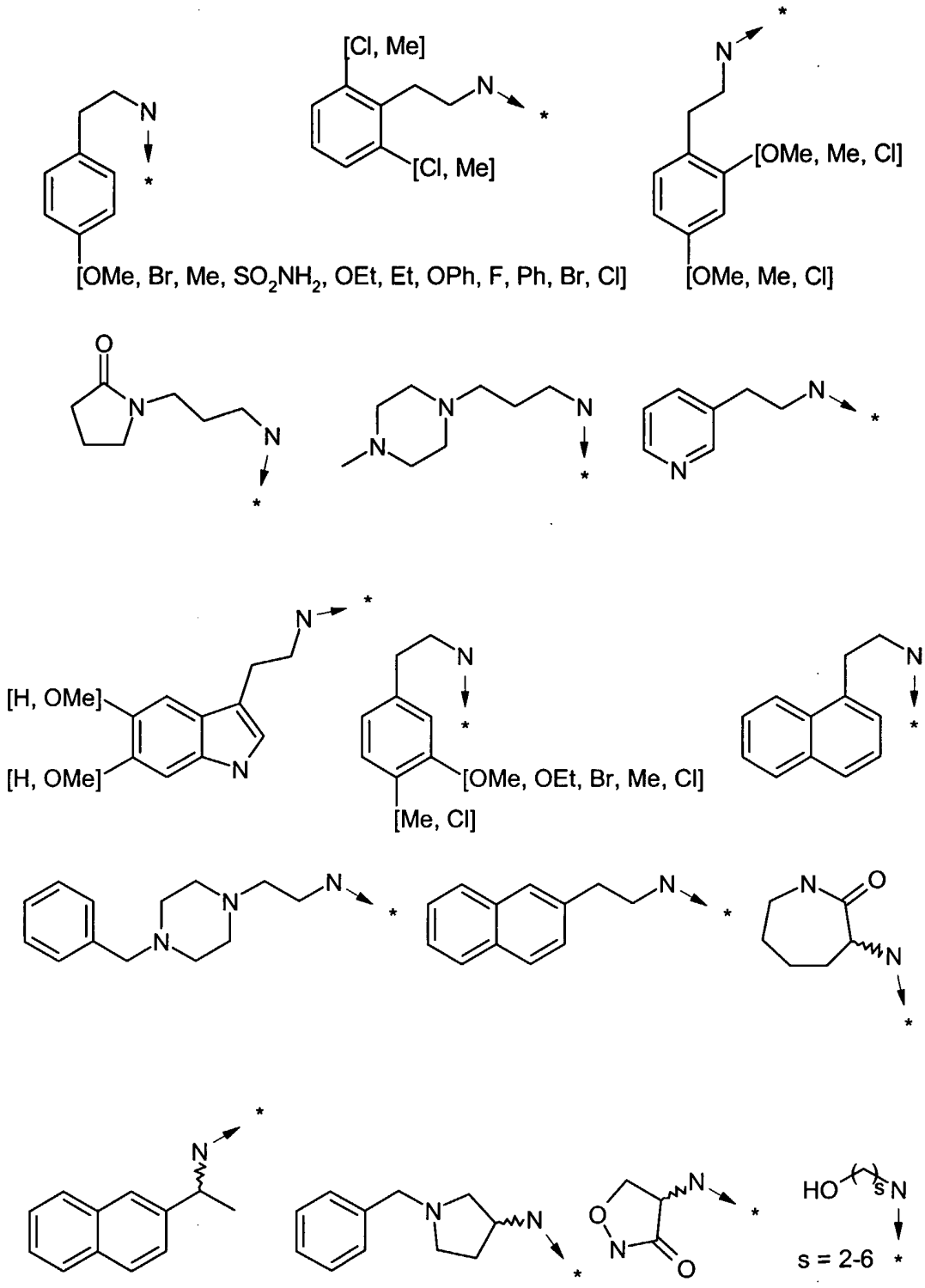

N
*

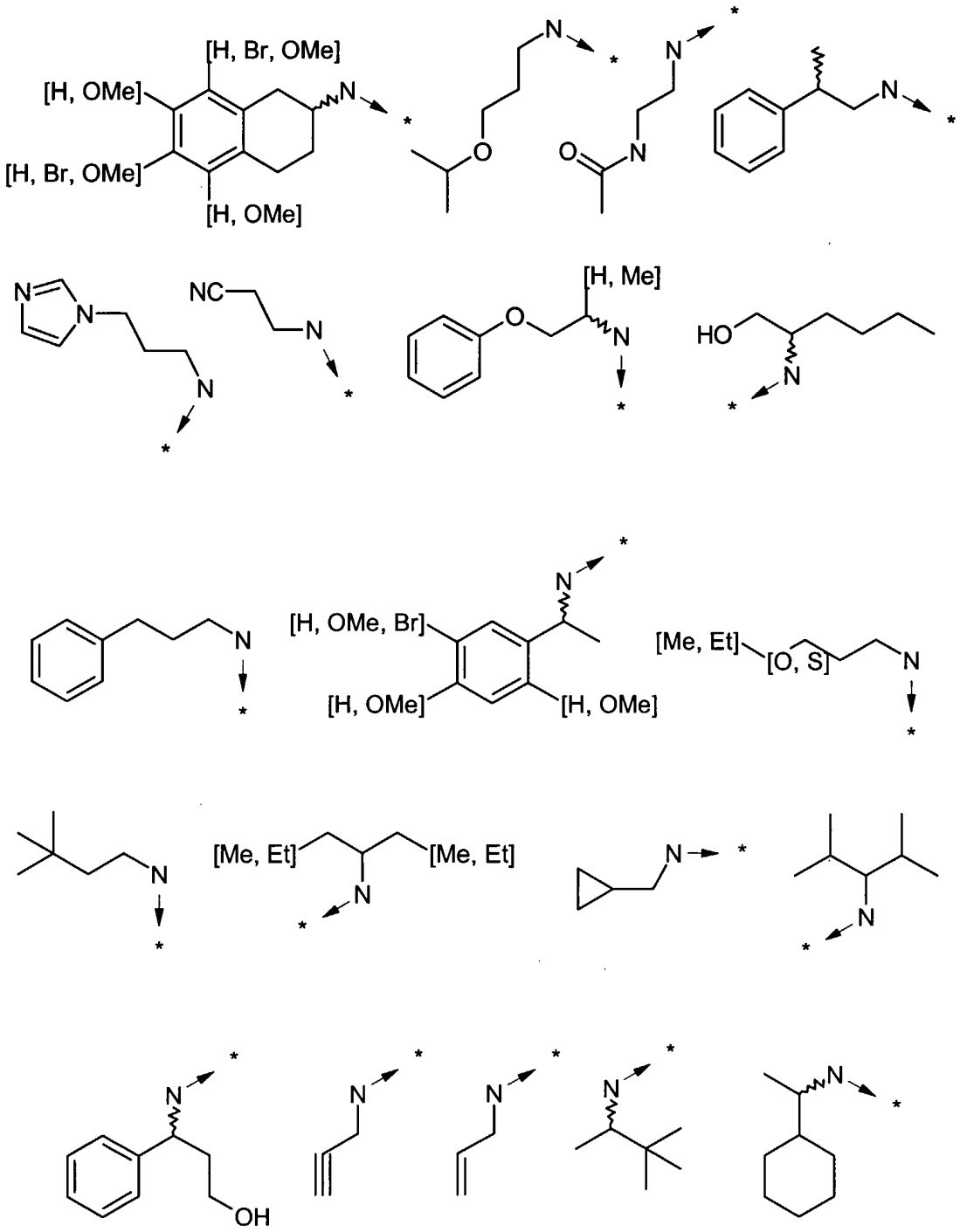

N
N
*

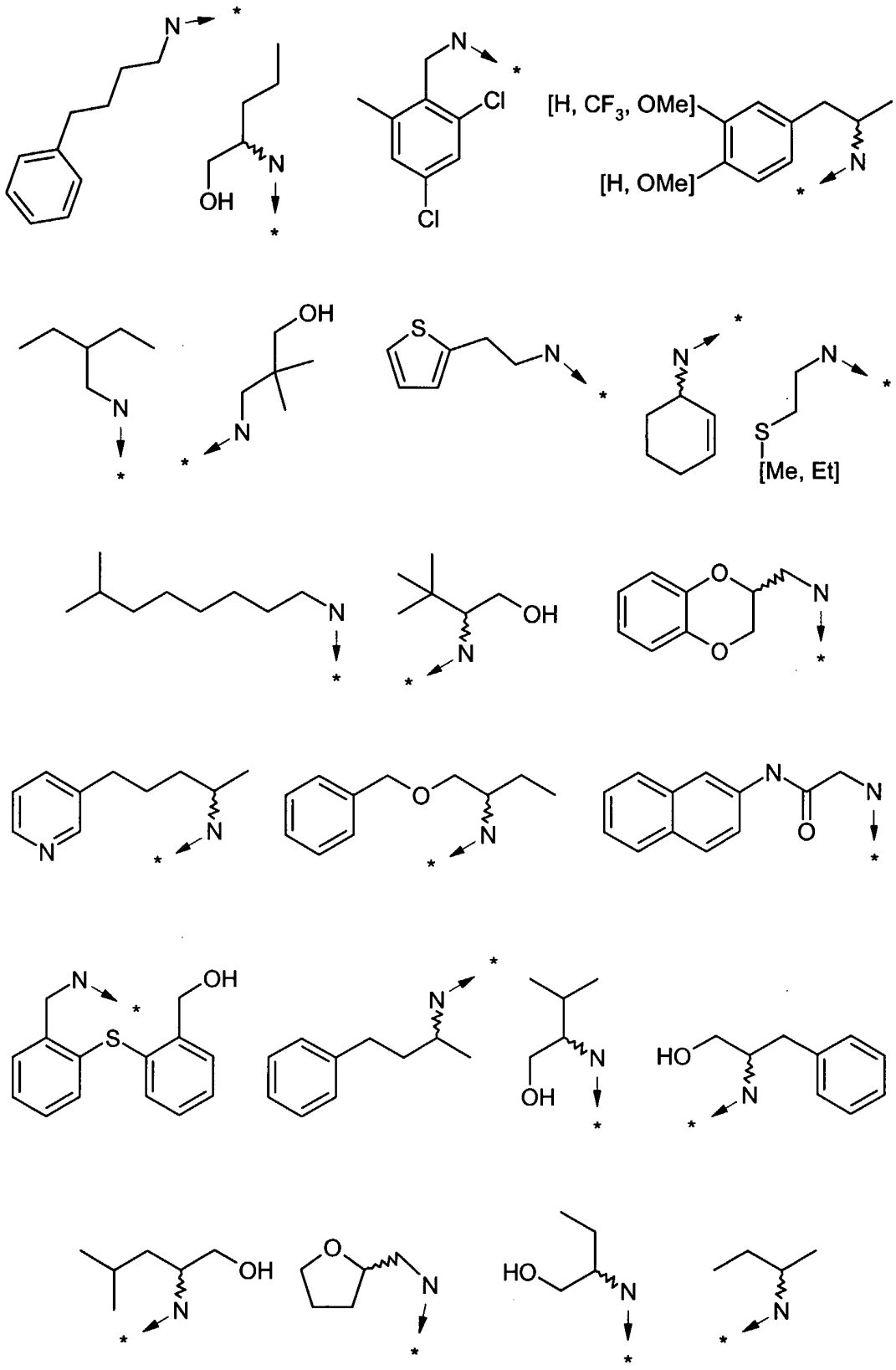

*
N
OMe
OMe

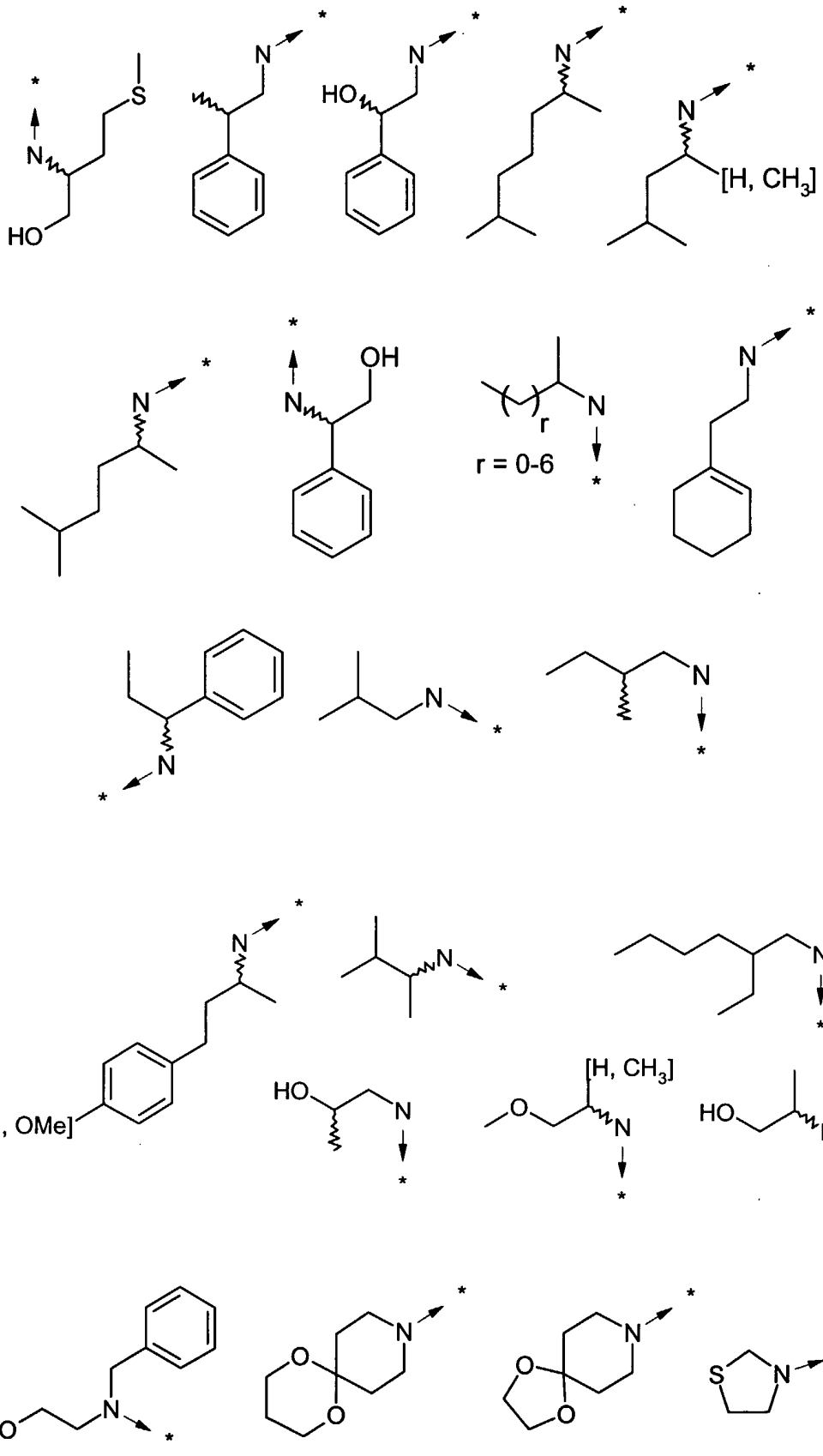

N
*
[H, Cl, OMe, OEt, Me, OPh]

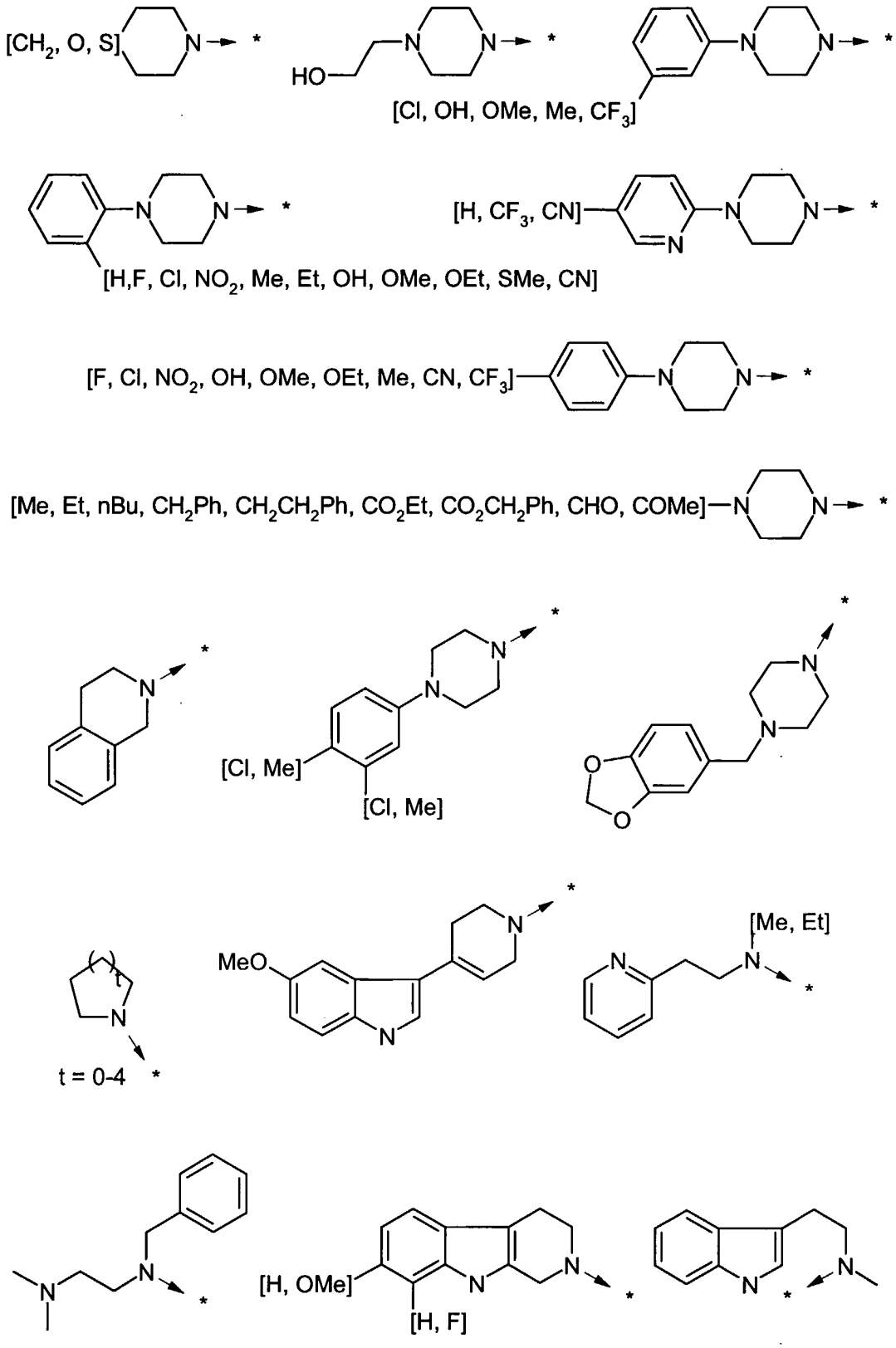

MeO
N
*
OMe

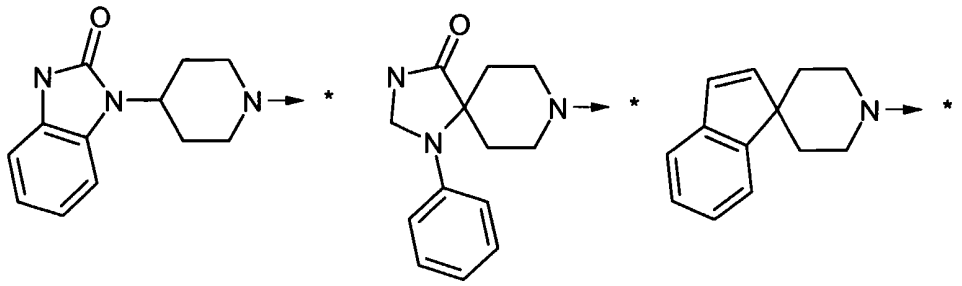

[Cl, Me]
[Cl, Me]
[OMe, Me, Cl]
[OMe, Br, Me, SO_2NH_2, OEt, Et, OPh, F, Ph, Br, Cl]
[OMe, Me, Cl]
[H, OMe]
[H, OMe]
[OMe, OEt, Br, Me, Cl]
[Me, Cl]
HO
s
N
s = 2-6

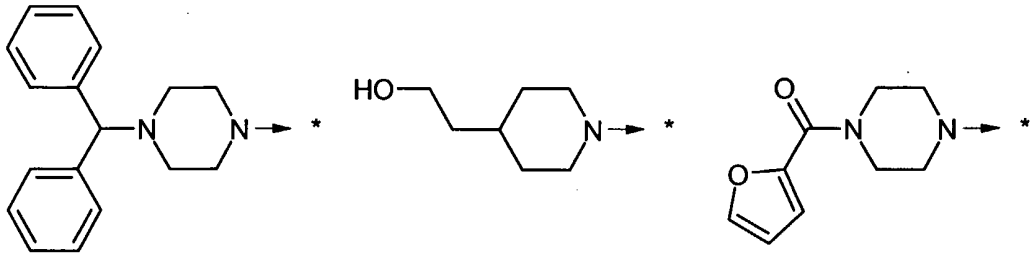

[H, Br, OMe]
[H, OMe]
[H, Br, OMe]
[H, OMe]
N
O
O
N
N
N
N
N
NC
N
[H, Me]
O
N
HO
N
[H, OMe, Br]
[H, OMe]
[H, OMe]
N
[Me, Et]
[O, S]
N
N
[Me, Et]
[Me, Et]
N
N
N
OH
N
N
N
N

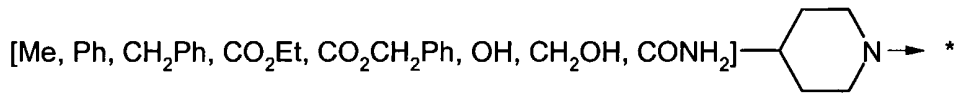

[H, CF3, OMe]
[H, OMe]
[Me, Et]


HO
S
N
OH
[H, CH3]
r = 0-6
[H, OMe]
[H, CH3]
O

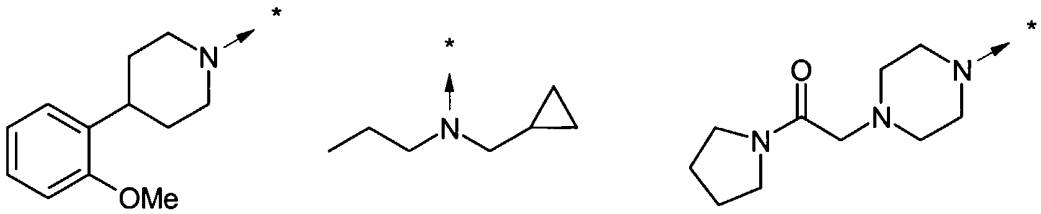

[CH2, O, S]
HO
[Cl, OH, OMe, Me, CF3]
[H,F, Cl, NO2, Me, Et, OH, OMe, OEt, SMe, CN]
[H, CF3, CN]
[F, Cl, NO2, OH, OMe, OEt, Me, CN, CF3]
[Me, Et, nBu, CH2Ph, CH2CH2Ph, CO2Et, CO2CH2Ph, CHO, COMe]
[Cl, Me]
[Cl, Me]
t = 0-4
MeO
[Me, Et]
[H, OMe]
[H, F]

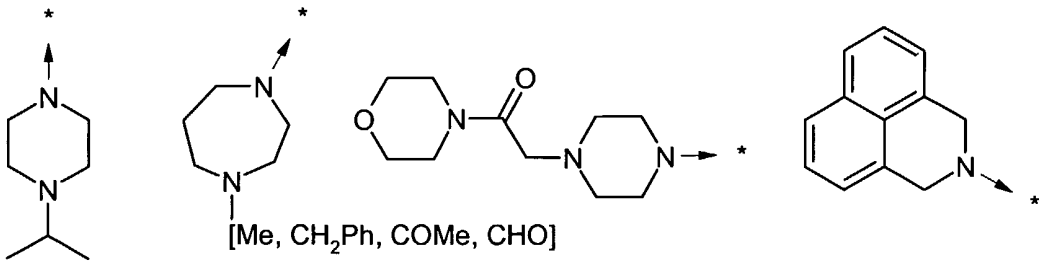




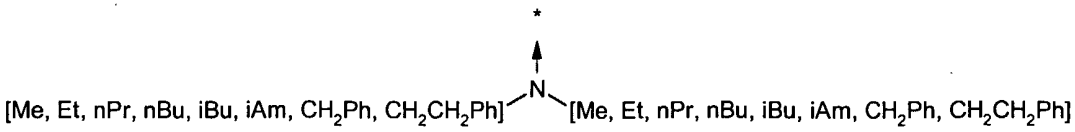


[Me, Ph, CH_2Ph, CO_2Et, CO_2CH_2Ph, OH, CH_2OH, $CONH_2$]

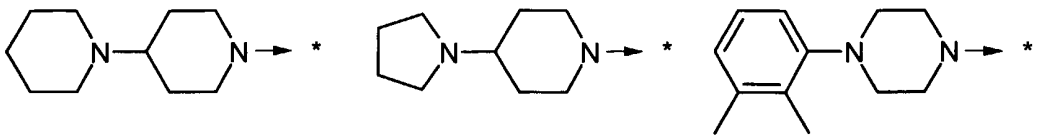


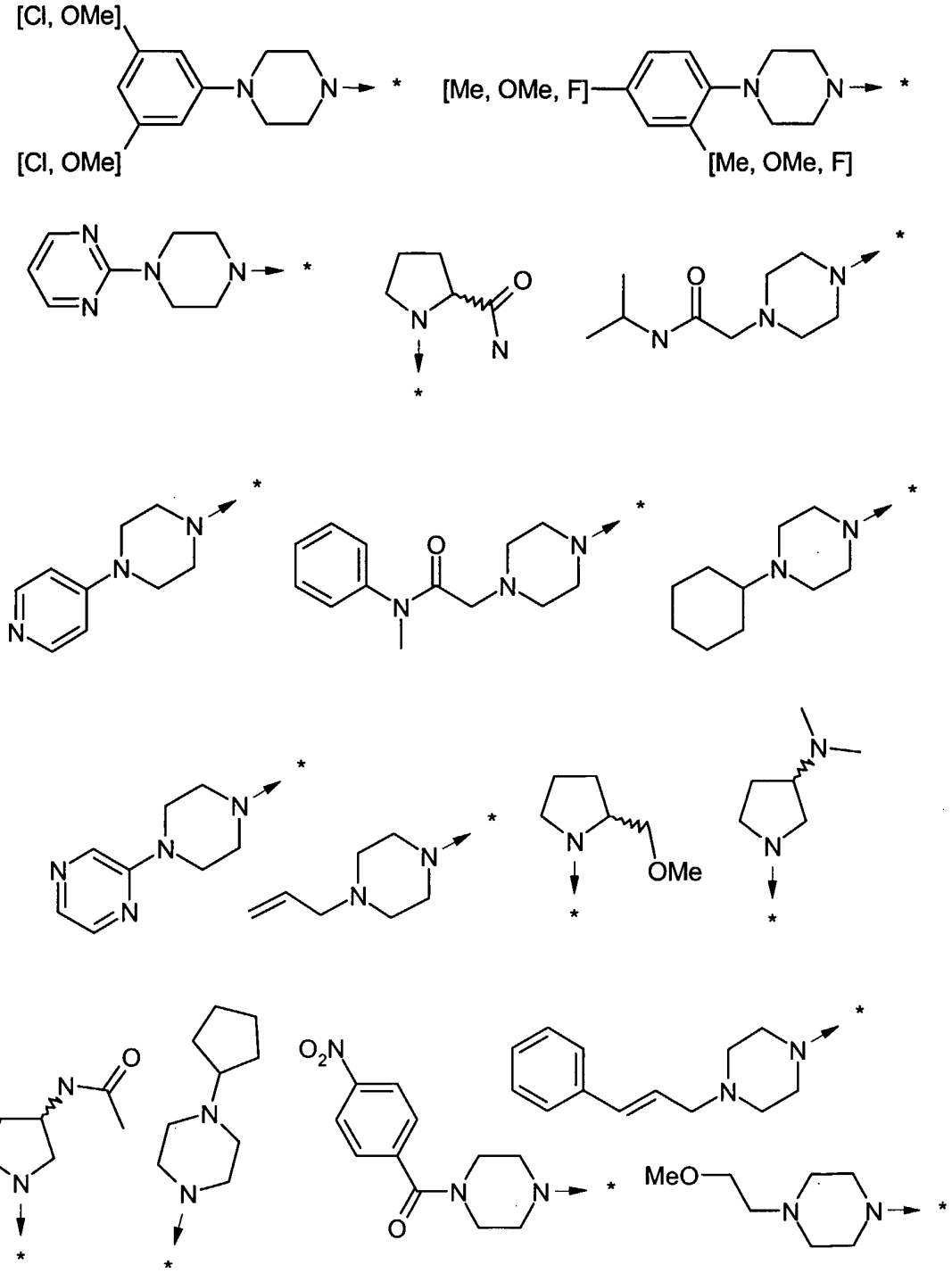


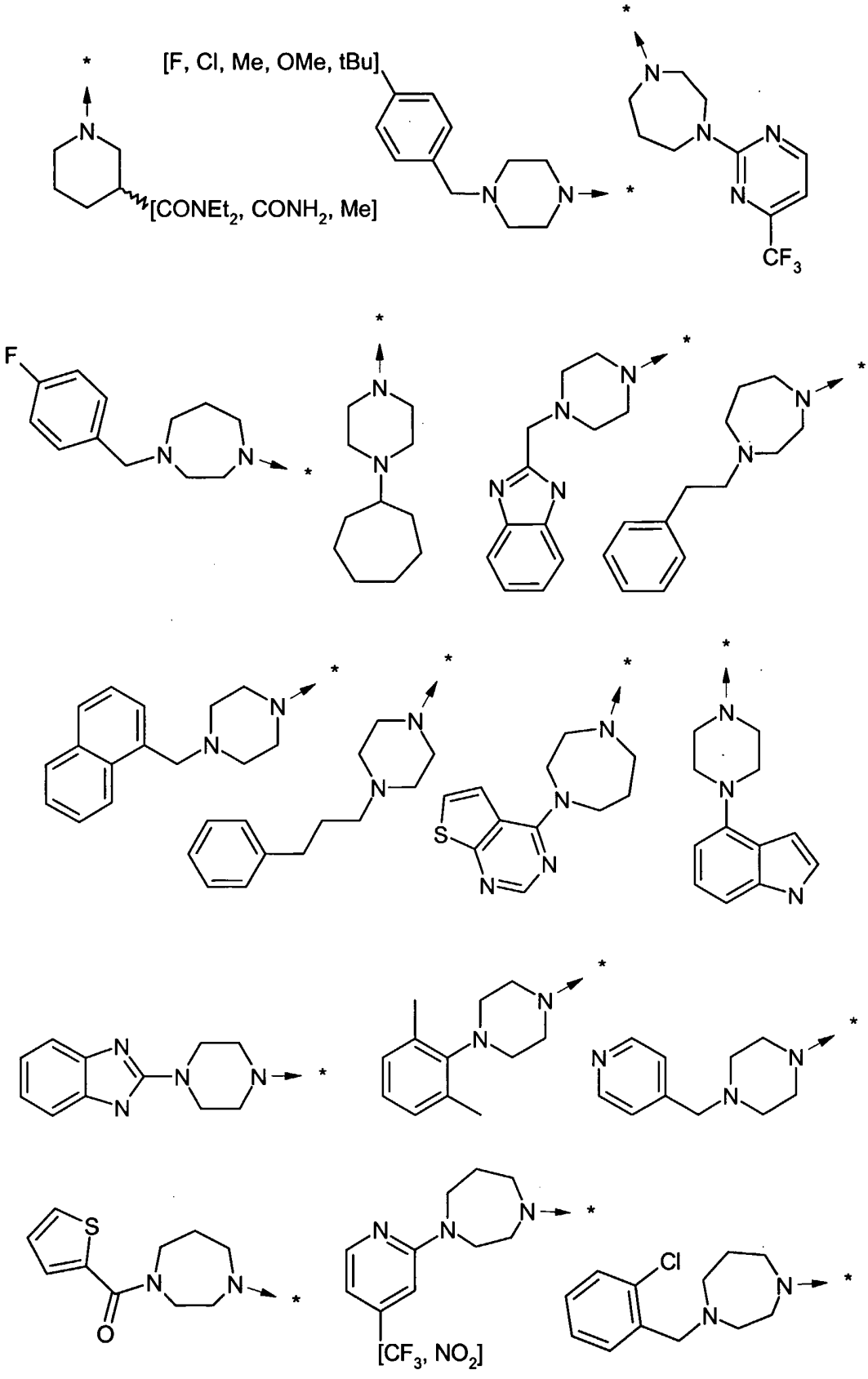
[Me, CH_2Ph, COMe, CHO]

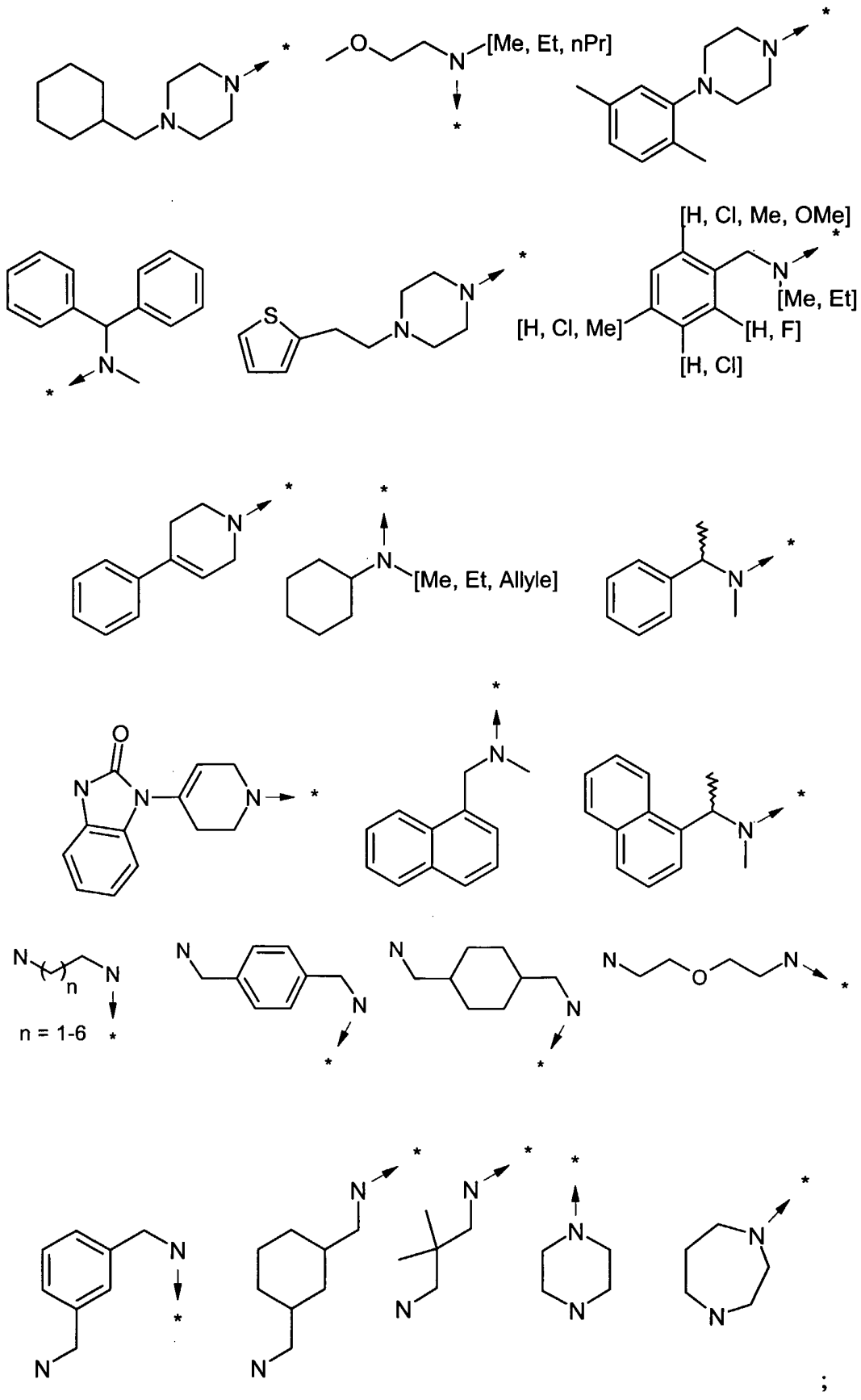


[Me, Et, nPr, nBu, iBu, iAm, CH_2Ph, CH_2CH_2Ph] [Me, Et, nPr, nBu, iBu, iAm, CH_2Ph, CH_2CH_2Ph]

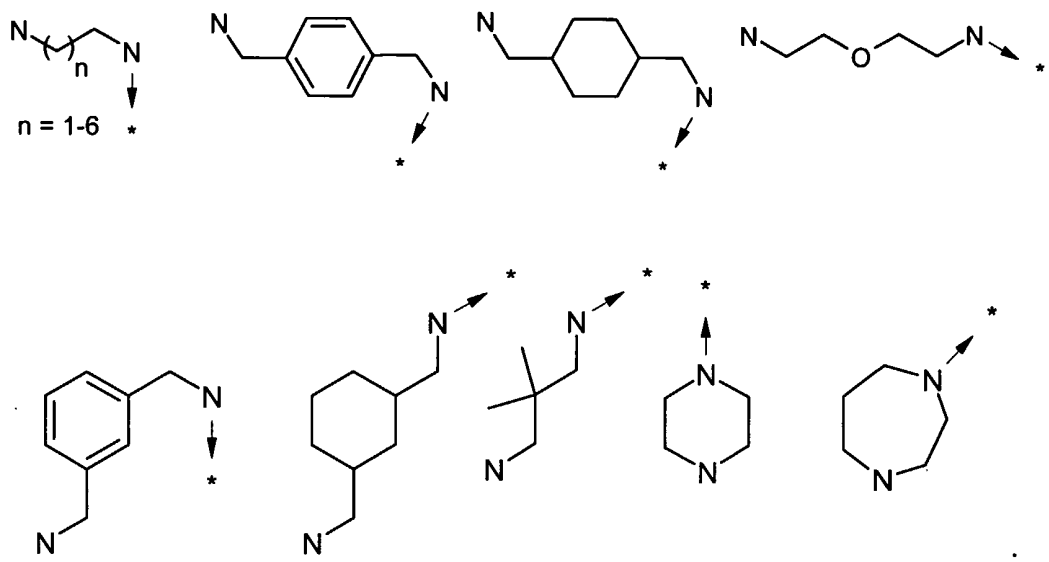



[Cl, OMe]
[Cl, OMe]
[Me, OMe, F]
[Me, OMe, F]
OMe
MeO
O_2N


[F, Cl, Me, OMe, tBu]
[CONEt2, CONH2, Me]
CF3
F
S
O
Cl
[CF3, NO2]


[Me, Et, nPr]
[H, Cl, Me, OMe]
[Me, Et]
[H, Cl, Me]
[H, F]
[H, Cl]
[Me, Et, Allyle]
n = 1-6

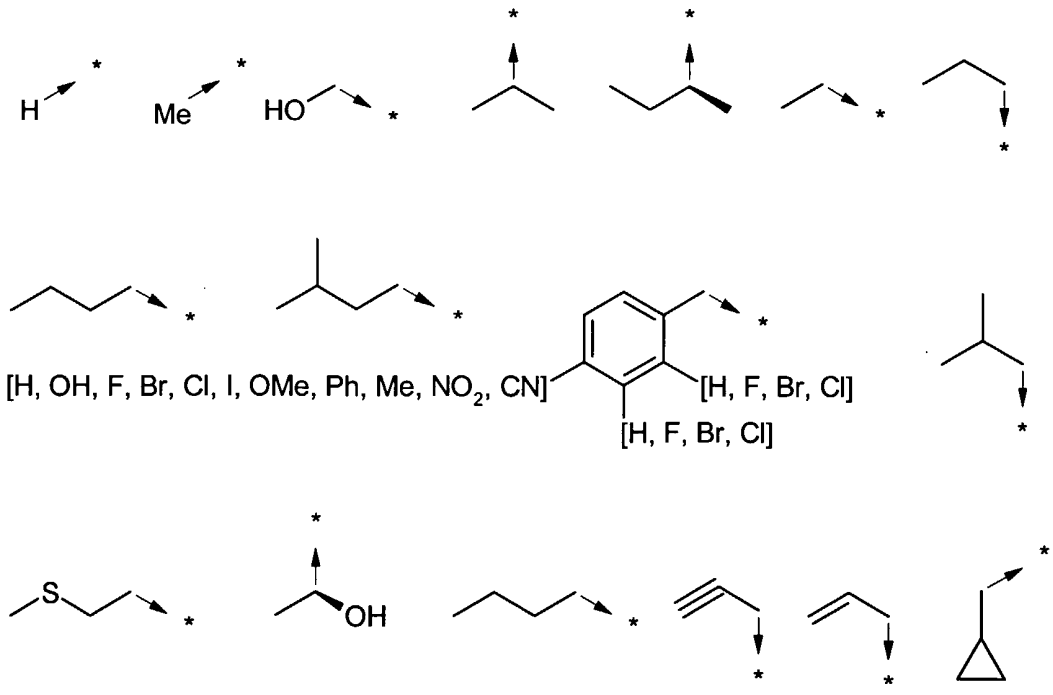
R10 représente l'un des radicaux suivants :

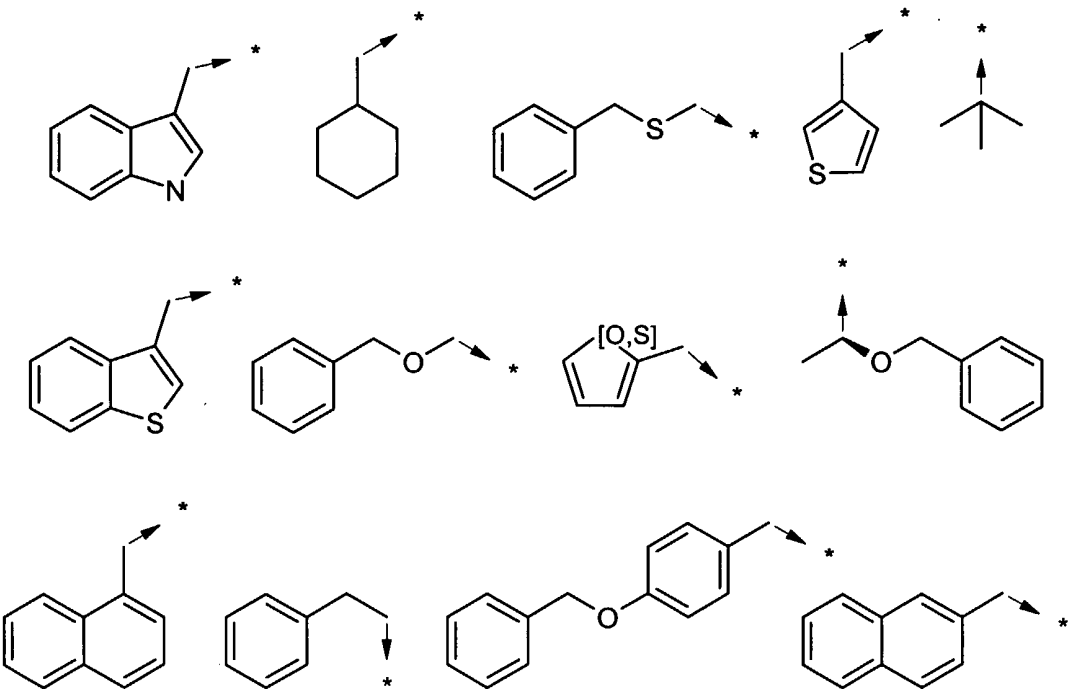


;

R11 représente H ;

R12 représente l'un des radicaux suivants :



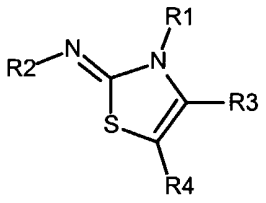


;

étant entendu que pour R4, lorsque le groupe aryle est substitué, il peut l'être de 1 à 5 fois (outre la liaison qui le relie au reste de la molécule) par des radicaux choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle ou alkoxy.

Les composés de l'invention seront de préférence tels que R4 représente H.

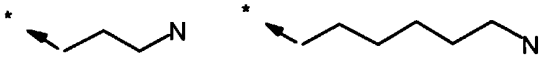
Plus préférentiellement, les composés selon l'invention répondront à la formule générale **(II)**



(II)

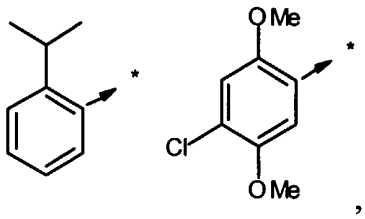
dans laquelle :

- soit R1 représente l'un des radicaux ci-après



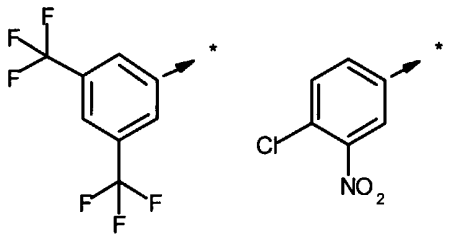
,

R2 représente l'un des radicaux ci-après



,

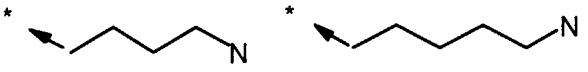
R3 représente l'un des radicaux ci-après



,

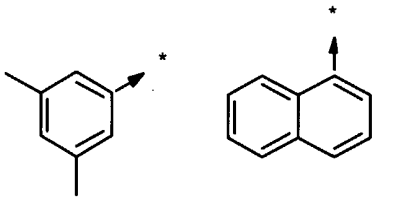
et R4 représente H ;

- soit encore R1 représente l'un des radicaux ci-après



,

R2 représente l'un des radicaux ci-après

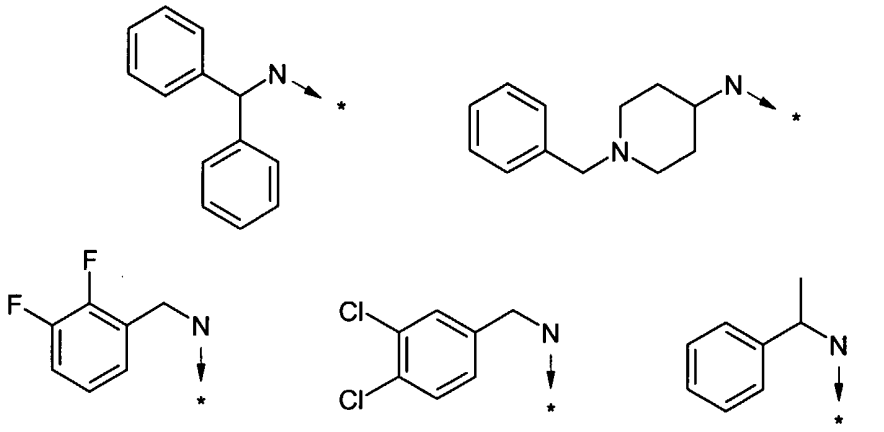


,

R3 représente COR5,

R4 représente H,

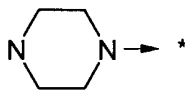
et R5 représente l'un des radicaux ci-après



;

- soit enfin R1 représente le radical –C(R11)(R12)-CO-R10 dans lequel

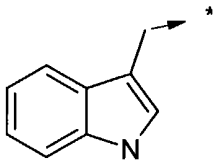
R10 représente le radical



,

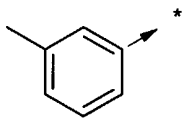
R11 représente H

et R12 représente le radical



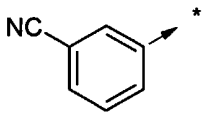
,

R2 représente le radical



,

R3 représente le radical

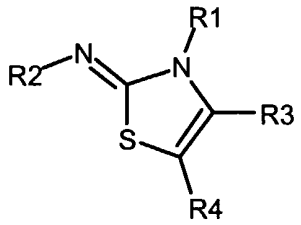


,

et R4 représente H.

L'invention concerne de plus des procédés de préparation sur support solide des composés de formule générale **(I)** décrits précédemment (applicables également aux composés correspondants de formule générale **(II)**).

Selon l'invention, les composés de formule générale **(I)a**



(I)a

dans laquelle :

R1 représente un radical $-CH_2-A1-NH_2$, dans lequel A1 représente un radical $-(CH_2)_n-$, $-(CH_2)_n-O-(CH_2)_p-$, aralkylène ou cycloalkylalkylène, n et p représentant des entiers de 1 à 6 ;

R2 et R4 représentent les mêmes radicaux que dans la formule générale **(I)** ;

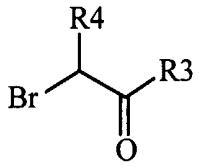
et R3 représente les mêmes radicaux que dans la formule générale **(I)** excepté les radicaux -CO-R5 ;

peuvent être préparés par exemple par un procédé caractérisé en ce qu'il comprend les étapes successives suivantes :

1) traitement, dans un solvant aprotique comme le dichlorométhane ou le diméthylformamide, d'une résine p-nitrophénylcarbonate de Wang avec un large excès de diamine symétrique $R1-NH_2$;

2) traitement, dans un solvant aprotique comme le dichlorométhane ou le diméthylformamide, de la résine isolée après l'étape 1) avec un isothiocyanate aromatique de formule générale R2-N=C=S dans laquelle le radical R2 a la même signification que dans la formule générale **(I)a** ;

3) traitement, dans un solvant aprotique comme le dioxane ou le diméthylformamide, de la résine obtenue à l'étape 2) avec le composé de formule générale **(III)**



(III)

dans laquelle les radicaux R3 et R4 ont la même signification que dans la formule générale **(I)a** ;

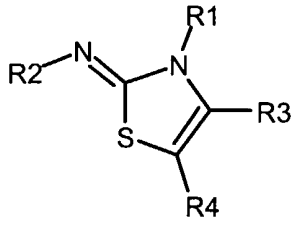
4) clivage de la résine dans des conditions acides ;

5) traitement dans des conditions basiques du produit obtenu après l'étape 4).

La préparation de la résine p-nitrophénylcarbonate de Wang est décrite plus loin dans la partie intitulée "PREPARATION DES COMPOSES DE L'INVENTION".

De préférence, pour le procédé ci-dessus, on utilisera pour avoir le large excès de l'étape 1) de l'ordre de 10 à 20 équivalents de diamine R1-NH_2. L'étape 1) s'effectuera de préférence à température ambiante. L'étape 3) s'effectue à une température supérieure à la température ambiante, par exemple à une température comprise entre 60 et 90 °C, en utilisant de l'ordre de 2 à 5 équivalents de composé de formule générale **(III)**. Dans l'étape 4), les conditions acides peuvent par exemple être créées en utilisant un mélange dichlorométhane / acide trifluoroacétique à 50 %, lesdites conditions acides étant de préférence maintenues pendant une durée de l'ordre de 1 à 2 heures. Dans l'étape 5), les conditions basiques peuvent par exemple être créées en utilisant une solution saturée en hydrogénocarbonate de sodium ou par élution sur une cartouche d'alumine basique.

Selon une variante de l'invention, les composés de formule générale **(I)b**



(I)b

dans laquelle :

R1 représente les mêmes radicaux que dans la formule générale **(I)**, excepté les radicaux du type -CH_2-A1-NH_2, dans lequel A1 représente un radical -$(CH_2)_n$-,

$-(CH_2)_n-O-(CH_2)_p-$, aralkylène ou cycloalkylalkylène, n et p représentant des entiers de 1 à 6, et excepté également les radicaux –C(R11)(R12)-CO-R10 ;

R2 représente un radical aminoalkylphényle ;

R3 représente les mêmes radicaux que dans la formule générale **(I)** excepté les radicaux -CO-R5 ;

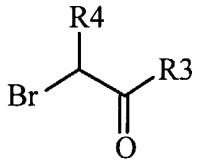
et R4 représente les mêmes radicaux que dans la formule générale **(I)** ;

peuvent être préparés par exemple par un procédé caractérisé en ce qu'il comprend les étapes successives suivantes :

1) traitement, dans un solvant aprotique comme le dichlorométhane ou le diméthylformamide, d'une résine p-nitrophénylcarbonate de Wang avec un excès d'aminoalkylaniline de formule générale $R2-NH_2$ dans laquelle le radical R2 a la même signification que dans la formule générale **(I)b** ;

2) traitement, dans un solvant aprotique comme le dichlorométhane ou le diméthylformamide, de la résine isolée après l'étape 1) avec un isothiocyanate de formule générale R1-N=C=S dans laquelle le radical R1 a la même signification que dans la formule générale **(I)b** ;

3) traitement, dans un solvant aprotique comme le dioxane ou le diméthylformamide, de la résine obtenue à l'étape 2) avec le composé de formule générale **(III)**



(III)

dans laquelle les radicaux R3 et R4 ont la même signification que dans la formule générale **(I)b** ;

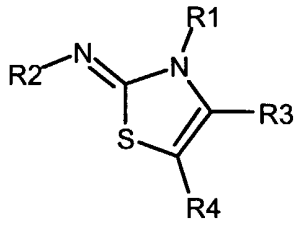
4) clivage de la résine dans des conditions acides ;

5) traitement dans des conditions basiques du produit obtenu après l'étape 4).

De préférence, pour le procédé ci-dessus, on utilisera pour avoir l'excès de l'étape 1) de l'ordre de 5 à 10 équivalents d'aminoalkylaniline. L'étape 1) s'effectuera de préférence à température ambiante. L'étape 3) s'effectue à une température supérieure à la

température ambiante, par exemple à une température comprise entre 60 et 90 °C, en utilisant de l'ordre de 2 à 5 équivalents de composé de formule générale **(III)**. Dans l'étape 4), les conditions acides peuvent par exemple être créées en utilisant un mélange dichlorométhane / acide trifluoroacétique à 50 %, lesdites conditions acides étant de préférence maintenues pendant une durée de l'ordre de 1 à 2 heures. Dans l'étape 5), les conditions basiques peuvent par exemple être créées en utilisant une solution saturée en hydrogénocarbonate de sodium ou par élution sur une cartouche d'alumine basique.

Selon une autre variante de l'invention, les composés de formule générale **(I)c**



(I)c

dans laquelle :

R1 représente un radical $-CH_2-A1-NH_2$, dans lequel A1 représente un radical $-(CH_2)_n-$, $-(CH_2)_n-O-(CH_2)_p-$, aralkylène ou cycloalkylalkylène, n et p représentant des entiers de 1 à 6 ;

R2 représente les mêmes radicaux que dans la formule générale **(I)** ;

R3 représente un radical -CO-R5 ;

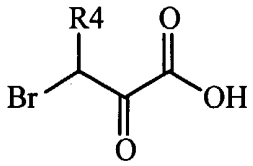
et R4 et R5 représentent les mêmes radicaux que dans la formule générale **(I)** ;

peuvent être préparés par un procédé caractérisé en ce qu'il comprend les étapes successives suivantes :

1) traitement, dans un solvant aprotique comme le dichlorométhane ou le diméthylformamide, d'une résine p-nitrophénylcarbonate de Wang avec un large excès de diamine symétrique de formule générale $R1-NH_2$ dans laquelle le radical R1 a la même signification que dans la formule générale **(I)c** ;

2) traitement, dans un solvant aprotique comme le dichlorométhane ou le diméthylformamide, de la résine isolée après l'étape 1) avec un isothiocyanate aromatique de formule générale R2-N=C=S dans laquelle le radical R2 a la même signification que dans la formule générale **(I)c** ;

3) traitement, dans un solvant aprotique comme le dioxane ou le diméthylformamide, de la résine obtenue à l'étape 2) avec l'acide de formule générale **(IV)**



(IV)

dans laquelle le radical R4 a la même signification que dans la formule générale **(I)c** ;

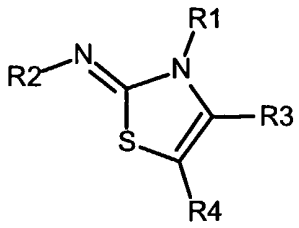
4) couplage peptidique ;

5) clivage de la résine dans des conditions acides ;

6) traitement dans des conditions basiques du produit obtenu après l'étape 5).

De préférence, pour le procédé ci-dessus, on utilisera pour avoir le large excès de l'étape 1) de l'ordre de 10 à 20 équivalents de diamine symétrique. L'étape 1) s'effectuera de préférence à température ambiante. L'étape 3) s'effectue à une température supérieure à la température ambiante, par exemple à une température comprise entre 60 et 90 °C, en utilisant de l'ordre de 2 à 5 équivalents d'acide de formule générale **(IV)**. Le couplage peptidique de l'étape 4) est effectué par exemple dans le DMF avec des agents de couplage comme par exemple le dicyclohexylcarbodiimide (DCC), le diisopropylcarbodiimide (DIC), un mélange DIC/N-hydroxybenzotriazole (HOBt), l'hexafluorophosphate de benzotriazolyloxytris(diméthylamino)phosphonium (PyBOP), l'hexafluorophosphate de 2-(1*H*-benzotriazol-1-yl)-1,1,3,3-tétraméthyluronium (HBTU) ou le tétrafluoroborate de 2-(1*H*-benzotriazol-1-yl)-1,1,3,3-tétraméthyluronium (TBTU) et des composés aminés. De préférence, les agents de couplage seront utilisés dans des proportions de 4 à 5 équivalents, tout comme les composés aminés, et la réaction aura lieu à une température de l'ordre de la température ambiante pendant une durée de l'ordre de 1 à 24 heures. Dans l'étape 5), les conditions acides peuvent par exemple être créées en utilisant un mélange dichlorométhane / acide trifluoroacétique à 50 %, lesdites conditions acides étant de préférence maintenues pendant une durée de l'ordre de 1 à 2 heures. Dans l'étape 6), les conditions basiques peuvent par exemple être créées en utilisant une solution saturée en hydrogénocarbonate de sodium ou par élution sur une cartouche d'alumine basique.

Selon encore une autre variante, les composés de formule générale **(I)d**



(I)d

dans laquelle :

R1 représente les mêmes radicaux que dans la formule générale **(I)**, excepté les radicaux du type $-CH_2-A1-NH_2$, dans lequel A1 représente un radical $-(CH_2)_n-$, $-(CH_2)_n-O-(CH_2)_p-$, aralkylène ou cycloalkylalkylène, n et p représentant des entiers de 1 à 6, et excepté également les radicaux –C(R11)(R12)-CO-R10 ;

R2 représente un radical aminoalkylphényle ;

R3 représente un radical -CO-R5 ;

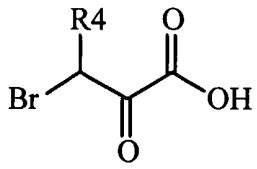
et R4 et R5 représentent les mêmes radicaux que dans la formule générale **(I)** ;

peuvent être préparés par un procédé caractérisé en ce qu'il comprend les étapes successives suivantes :

1) traitement, dans un solvant aprotique comme le dichlorométhane ou le diméthylformamide, d'une résine p-nitrophénylcarbonate de Wang avec un excès d'aminoalkylaniline de formule générale $R2-NH_2$ dans laquelle le radical R2 a la même signification que dans la formule générale **(I)d** ;

2) traitement, dans un solvant aprotique comme le dichlorométhane ou le diméthylformamide, de la résine isolée après l'étape 1) avec un isothiocyanate de formule générale R1-N=C=S dans laquelle le radical R1 a la même signification que dans la formule générale **(I)d** ;

3) traitement, dans un solvant aprotique comme le dioxane ou le diméthylformamide, de la résine obtenue à l'étape 2) avec l'acide de formule générale **(IV)**



(IV)

dans laquelle le radical R4 a la même signification que dans la formule générale **(I)d** ;

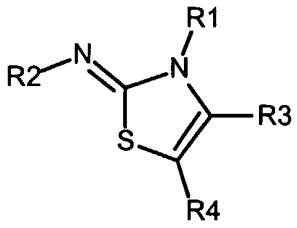
4) couplage peptidique ;

5) clivage de la résine dans des conditions acides ;

6) traitement dans des conditions basiques du produit obtenu après l'étape 5).

De préférence, pour le procédé ci-dessus, on utilisera pour avoir l'excès de l'étape 1) de l'ordre de 5 à 10 équivalents d'aminoalkylaniline. L'étape 1) s'effectuera de préférence à température ambiante. L'étape 3) s'effectue à une température supérieure à la température ambiante, par exemple à une température comprise entre 60 et 90 °C, en utilisant de l'ordre de 2 à 5 équivalents d'acide de formule générale **(IV)**. Le couplage peptidique de l'étape 4) est effectué par exemple dans le DMF avec des agents de couplage comme par exemple le dicyclohexylcarbodiimide (DCC), le diisopropylcarbodiimide (DIC), un mélange DIC/N-hydroxybenzotriazole (HOBt), l'hexafluorophosphate de benzotriazolyloxytris(diméthylamino)phosphonium (PyBOP), l'hexafluorophosphate de 2-(1*H*-benzotriazol-1-yl)-1,1,3,3-tétraméthyluronium (HBTU) ou le tétrafluoroborate de 2-(1*H*-benzotriazol-1-yl)-1,1,3,3-tétraméthyluronium (TBTU) et des composés aminés. De préférence, les agents de couplage seront utilisés dans des proportions de 4 à 5 équivalents, tout comme les composés aminés, et la réaction aura lieu à une température de l'ordre de la température ambiante pendant une durée de l'ordre de 1 à 24 heures. Dans l'étape 5), les conditions acides peuvent par exemple être créées en utilisant un mélange dichlorométhane / acide trifluoroacétique à 50 %, lesdites conditions acides étant de préférence maintenues pendant une durée de l'ordre de 1 à 2 heures. Dans l'étape 6), les conditions basiques peuvent par exemple être créées en utilisant une solution saturée en hydrogénocarbonate de sodium ou par élution sur une cartouche d'alumine basique.

Selon une autre variante, les composés de formule générale **(I)e**



(I)e

dans laquelle :

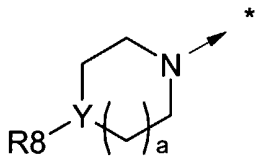
R1 représente les mêmes radicaux que dans la formule générale **(I)**, excepté les radicaux du type $-CH_2-A1-NH_2$, dans lequel A1 représente un radical $-(CH_2)_n-$, $-(CH_2)_n-O-(CH_2)_p-$, aralkylène ou cycloalkylalkylène, n et p représentant des entiers de 1 à 6, et excepté également les radicaux –C(R11)(R12)-CO-R10 ;

R2 représente les mêmes radicaux que dans la formule générale **(I)** ;

R3 représente un radical –CO-R5 ;

R4 représente H ;

R5 représente un radical $-NH-CH_2-A1-NH_2$, dans lequel A1 représente un radical alkylène linéaire ou ramifié comptant de 1 à 6 atomes de carbone, $-(CH_2)_n-O-(CH_2)_p-$, aralkylène ou cycloalkylalkylène, n et p représentant des entiers de 1 à 6, ou encore R5 représente le radical N(R6)(R7) répondant à la formule générale suivante :



dans laquelle :

R8 représente H ;

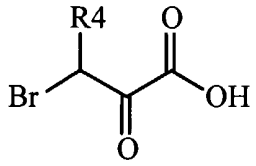
Y représente N ;

a représente 1 ou 2 ;

peuvent être préparés par un procédé caractérisé en ce qu'il comprend les étapes successives suivantes :

1) traitement, dans un solvant aprotique comme le dichlorométhane ou le diméthylformamide, d'une résine p-nitrophénylcarbonate de Wang avec un large excès de diamine symétrique de formule générale R5-H ;

2) couplage peptidique avec l'acide de formule générale **(IV)** sur la résine obtenue à l'étape 1)



(IV)

dans laquelle le radical R4 a la même signification que dans la formule générale **(I)e** ;

3) réaction de l'amine primaire de formule générale R1-NH_2 avec l'isothiocyanate de formule générale R2-NCS dans un solvant tel que le diméthylformamide ou le dioxane, R1 et R2 ayant les mêmes significations que dans la formule générale **(I)e** ;

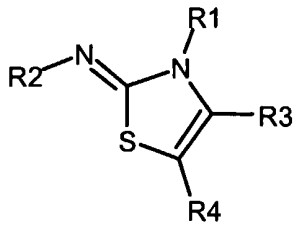
4) addition de la thiourée obtenue à l'étape 3) à la résine obtenue à l'étape 2) et chauffage du mélange ;

5) clivage de la résine dans des conditions acides ;

6) traitement dans des conditions basiques du produit obtenu après l'étape 5).

De préférence, pour le procédé ci-dessus, on utilisera pour avoir le large excès de l'étape 1) de l'ordre de 10 à 20 équivalents de diamine R5-H. L'étape 1) s'effectuera de préférence à température ambiante. Le couplage peptidique de l'étape 2) est effectué dans le DMF avec un agent de couplage comme par exemple le mélange DIC/N-hydroxybenzotriazole (HOBt). La réaction de l'étape 3) s'effectue de préférence dans un solvant comme le diméthylformamide ou le dioxane. Lors de l'addition de l'étape 4), on utilisera de préférence de 2 à 5 équivalents de thiourée par équivalent de résine ; de préférence encore, on chauffera à une température supérieure à la température ambiante, par exemple à une température de 40 à 100 °C (notamment à une température d'environ 80 °C) et pendant une durée de 2 à 24 heures. Dans l'étape 5), les conditions acides peuvent par exemple être créées en utilisant un mélange dichlorométhane / acide trifluoroacétique à 50 %, lesdites conditions acides étant de préférence maintenues pendant une durée de l'ordre de 1 à 2 heures. Dans l'étape 6), les conditions basiques peuvent par exemple être créées en utilisant une solution saturée en hydrogénocarbonate de sodium ou par élution sur une cartouche d'alumine basique.

Selon encore une autre variante, les composés de formule générale **(I)f**



(I)f

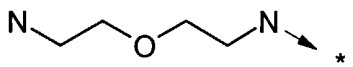
dans laquelle :

R1 représente un radical –C(R11)(R12)-CO-R10 ;

R2, R3 et R4 représentent les mêmes radicaux que dans la formule générale **(I)** ;

R10 représente un radical amino(C_2-C_7)alkylamino, ((aminoalkyl)aryl)alkylamino, ((aminoalkyl)cycloalkyl)alkylamino, pipérazinyle, homopipérazinyle,

ou R10 représente le radical représenté ci-dessous :



;

R11 représente H ;

R12 représente H ou un radical alkyle, (C_3-C_7)cycloalkyle, aralkyle carbocyclique ou hétérocyclique éventuellement substitué, propargyle, allyle, hydroxyalkyle, alkylthioalkyle, arylalkylalkoxyalkyle, arylalkylthioalkoxyalkyle ;

peuvent être préparés par un procédé caractérisé en ce qu'il comprend les étapes successives suivantes :

1) traitement, dans un solvant aprotique comme le dichlorométhane ou le diméthylformamide, d'une résine p-nitrophénylcarbonate de Wang avec un large excès de diamine symétrique de formule générale R10-H dans laquelle R10 a la même signification que dans la formule générale **(I)f** ;

2) couplage peptidique de la résine obtenue à l'étape 1) avec un acide aminé de formule générale HOOC-C(R11)(R12)-NH-Fmoc dans laquelle R11 et R12 ont la même signification que dans la formule générale **(I)f** ;

3) clivage du groupe Fmoc de la résine obtenue à l'étape 2) ;

4) réaction de la résine obtenue à l'étape 3) avec un isothiocyanate de formule générale R2-NCS dans laquelle R2 a la même signification que dans la formule générale **(I)f** ;

5) clivage de la résine dans des conditions acides ;

6) traitement dans des conditions basiques du produit obtenu après l'étape 5).

De préférence, pour le procédé ci-dessus, on utilisera pour avoir le large excès de l'étape 1) de l'ordre de 10 à 20 équivalents de diamine R10-H. L'étape 1) s'effectuera de préférence à température ambiante. Le couplage peptidique de l'étape 2) est effectué par exemple dans le DMF avec des agents de couplage comme par exemple le dicyclohexylcarbodiimide (DCC), le diisopropylcarbodiimide (DIC), un mélange DIC/N-hydroxybenzotriazole (HOBt), l'hexafluorophosphate de benzotriazolyloxytris(diméthylamino)phosphonium (PyBOP), l'hexafluorophosphate de 2-(1*H*-benzotriazol-1-yl)-1,1,3,3-tétraméthyluronium (HBTU) ou le tétrafluoroborate de 2-(1*H*-benzotriazol-1-yl)-1,1,3,3-tétraméthyluronium (TBTU). La réaction de l'étape 2) s'effectue de préférence à température ambiante et pendant une durée de 1 à 24 heures. La déprotection de l'étape 3) peut être effectuée, par exemple, par un mélange de DMF contenant 20% de pipéridine. L'étape 4) sera de préférence effectuée dans un solvant tel que le diméthylformamide ou le dichlorométhane, l'isothiocyanate étant de préférence ajouté en une proportion de 5 à 10 équivalents par équivalent de résine obtenue à l'étape 3). Dans l'étape 5), les conditions acides peuvent par exemple être créées en utilisant un mélange dichlorométhane / acide trifluoroacétique à 50 %, lesdites conditions acides étant de préférence maintenues pendant une durée de l'ordre de 1 à 2 heures. Dans l'étape 6), les conditions basiques peuvent par exemple être créées en utilisant une solution saturée en hydrogénocarbonate de sodium ou par élution sur une cartouche d'alumine basique.

L'invention a également pour objet, à titre de médicaments, les composés de formules générales **(I)** et **(II)** décrits précédemment ou leurs sels pharmaceutiquement acceptables. Elle concerne aussi des compositions pharmaceutiques comprenant lesdits composés ou leurs sels pharmaceutiquement acceptables, et leur utilisation pour la préparation d'un médicament destiné à traiter les états pathologiques ou les maladies dans lesquels un (ou plusieurs) des récepteurs de la somatostatine est (sont) impliqué(s).

En particulier, les composés de formules générales **(I)** et **(II)** décrits précédemment ou leurs sels pharmaceutiquement acceptables pourront être utilisés pour la préparation d'un médicament destiné à traiter les états pathologiques ou les maladies choisis parmi le groupe composé des états pathologiques ou des maladies qui suivent : l'acromégalie, les adénomes hypophysaires, la maladie de Cushing, les gonadotrophinomes et les

prolactinomes, les effets secondaires cataboliques des glucocorticoïdes, le diabète insulinodépendant, la rétinopathie diabétique, la néphropathie diabétique, le syndrome X, le phénomène de Dawn, l'angiopathie, l'angioplastie, l'hyperthyroïdie, le gigantisme, les tumeurs gastroentéropancréatiques endocriniennes dont le syndrome carcinoïde, le VIPome, l'insulinome, la nésidioblastose, l'hyperinsulinémie, le glucagonome, le gastrinome et le syndrome de Zollinger-Ellison, le GRFome ainsi que le saignement aigu des varices œsophagiennes, les ulcères, le reflux gastroœsophagien, le reflux gastroduodénal, la pancréatite, les fistules entérocutanées et pancréatiques mais aussi les diarrhées, les diarrhées réfractaires du syndrome d'immunodépression acquise, la diarrhée chronique sécrétoire, la diarrhée associée avec le syndrome de l'intestin irrité, les diarrhées induites par la chimiothérapie, les troubles liés au peptide libérateur de gastrine, les pathologies secondaires aux greffes intestinales, l'hypertension portale ainsi que les hémorragies des varices chez des malades avec cirrhose, l'hémorragie gastro-intestinale, l'hémorragie de l'ulcère gastroduodénale, le saignement des vaisseaux greffés, la maladie de Crohn, les scléroses systémiques, le dumping syndrome, le syndrome du petit intestin, l'hypotension, la sclérodermie et le carcinome thyroïdien médullaire, les maladies liées à l'hyperprolifération cellulaire comme les cancers et plus particulièrement le cancer du sein, le cancer de la prostate, le cancer thyroïdien ainsi que le cancer pancréatique et le cancer colorectal, les fibroses et plus particulièrement la fibrose du rein, la fibrose du foie, la fibrose du poumon, la fibrose de la peau, également la fibrose du système nerveux central ainsi que celle du nez et la fibrose induite par la chimiothérapie, et, dans d'autres domaines thérapeutiques, les céphalées y compris les céphalées associées aux tumeurs hypophysaires, les douleurs, les désordres inflammatoires comme l'arthrite, les accès de panique, la chimiothérapie, la cicatrisation des plaies, l'insuffisance rénale résultant d'un retard de croissance, l'hyperlipidémie, l'obésité et le retard de croissance lié à l'obésité, le retard de croissance utérin, la dysplasie du squelette, le syndrome de Noonan, le syndrome d'apnée du sommeil, la maladie de Graves, la maladie polykystique des ovaires, les pseudokystes pancréatiques et ascites, la leucémie, le méningiome, la cachexie cancéreuse, l'inhibition des H pylori, le psoriasis, le rejet chronique des allogreffes ainsi que la maladie d'Alzheimer et enfin l'ostéoporose.

De préférence, les composés de formules générales **(I)** et **(II)** décrits précédemment ou leurs sels pharmaceutiquement acceptables pourront être utilisés pour la préparation d'un médicament destinés à traiter les états pathologiques ou les maladies choisis parmi le groupe composé des états pathologiques ou des maladies qui suivent : l'acromégalie, les adénomes hypophysaires ou les tumeurs gastroentéropancréatiques endocriniennes dont le syndrome carcinoïde, et les saignements gastro-intestinaux.

Par sel pharmaceutiquement acceptable, on entend notamment des sels d'addition d'acides inorganiques tels que chlorhydrate, sulfate, phosphate, diphosphate, bromhydrate et nitrate ou d'acides organiques tels que acétate, maléate, fumarate, tartrate, succinate, citrate, lactate, méthane sulfonate, p-toluènesulfonate, pamoate, oxalate et stéarate. Entrent également dans le champ de la présente invention, lorsqu'ils sont utilisables, les sels formés à partir de bases telles que l'hydroxyde de sodium ou de potassium. Pour d'autres exemples de sels pharmaceutiquement acceptables, on peut se référer à "Pharmaceutical salts", *J. Pharm. Sci.* **66**:1 (1977).

La composition pharmaceutique peut être sous forme d'un solide, par exemple des poudres, des granules, des comprimés, des gélules, des liposomes ou des suppositoires. Les supports solides appropriés peuvent être, par exemple, le phosphate de calcium, le stéarate de magnésium, le talc, les sucres, le lactose, la dextrine, l'amidon, la gélatine, la cellulose, la cellulose de méthyle, la cellulose carboxyméthyle de sodium, la polyvinylpyrrolidine et la cire. Les suspensions comprendront en particulier les suspensions de microparticules à libération prolongée chargées en principe actif (notamment des microparticules en polylactide-co-glycolide ou PLGA - cf. par exemple les brevets US 3,773,919, EP 52 510 ou EP 58 481 ou la demande de brevet PCT WO 98/47489), lesquelles permettent l'administration d'une dose journalière déterminée sur une période de plusieurs jours à plusieurs semaines.

Les compositions pharmaceutiques contenant un composé de l'invention peuvent aussi se présenter sous forme liquide, par exemple, des solutions, des émulsions, des suspensions ou des sirops. Les supports liquides appropriés peuvent être, par exemple, l'eau, les solvants organiques tels que le glycérol ou les glycols, de même que leurs mélanges, dans des proportions variées, dans l'eau.

L'administration d'un médicament selon l'invention pourra se faire par voie topique, orale, parentérale, par injection intramusculaire, etc.

La dose d'administration envisagée pour médicament selon l'invention est comprise entre 0,1 mg à 10 g suivant le type de composé actif utilisé.

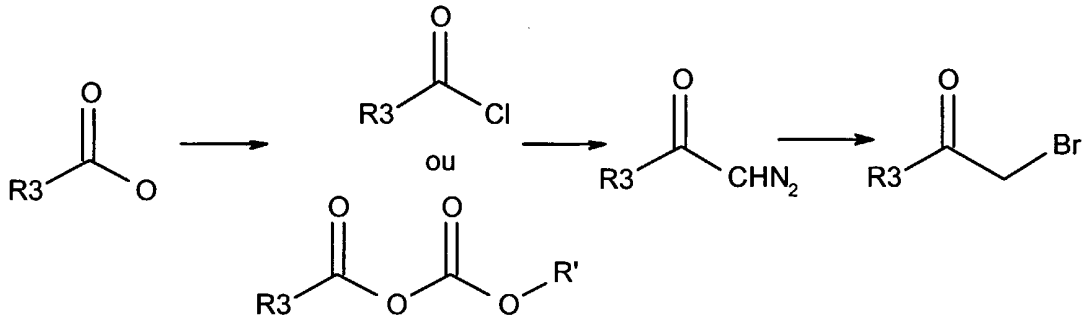
Ces composés peuvent être préparés selon les méthodes décrites ci-après.

PREPARATION DES COMPOSES DE L'INVENTION

I) Préparation d'α-bromocétones

PREMIERE METHODE

Cette méthode s'inspire des protocoles décrits dans les publications suivantes : Macholan, L.; Skursky, L. *Chem. Listy* **1955**, *49*, 1385-1388 ; Bestman, H.J. ; Seng, F. *Chem. Ber.* **1963**, *96*, 465-469 ; Jones, R.G. ; Kornfeld, E.C. ; McLaughlin, K.C. *J. Am. Chem. Soc.* **1950**, *72*, 4526-4529 ; Nimgirawath, S. ; Ritchie, E. ; Taylor, W.C. *Aust. J. Chem.* **1973**, *26*, 183-193).



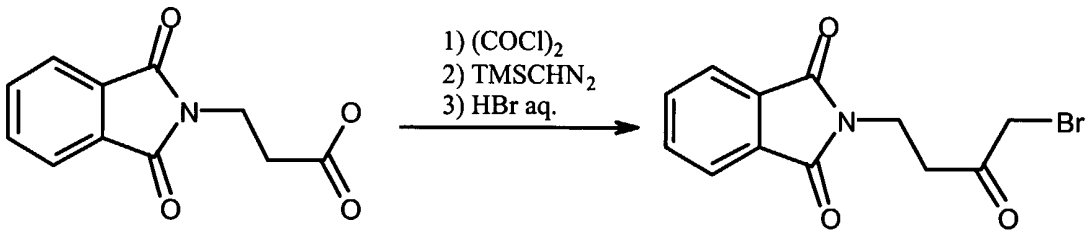
Un acide carboxylique est tout d'abord converti en un chlorure d'acide en utilisant du chlorure d'oxalyle ou de thionyle, ou en l'activant sous forme d'un anhydride à l'aide d'un chloroformiate d'alkyle (par exemple un chloroformiate d'isobutyle, cf. Krantz, A. ; Copp, L.J. *Biochemistry* **1991**, *30*, 4678-4687 ; ou un chloroformiate d'éthyle, cf. Podlech, J. ; Seebach, D. *Liebigs Ann.* **1995**, 1217-1228) en présence d'une base (triéthylamine ou N-méthylmorpholine).

Le groupe carboxyle activé est ensuite transformé en diazocétone à l'aide de diazométhane en solution éthérée ou d'une solution commerciale de triméthylsilyldiazométhane (Aoyama, T. ; Shiori, T. *Chem. Pharm. Bull.* **1981**, *29*, 3249-3255) dans un solvant aprotique comme le diéthyléther, le tétrahydrofuranne (THF) ou l'acétonitrile.

La bromation est ensuite effectuée en utilisant un agent bromant comme l'acide hydrobromique dans l'acide acétique, l'acide hydrobromique aqueux dans le diéthyléther ou le dichlorométhane.

Préparation 1

2-(4-bromo-3-oxobutyl)-1H-isoindole-1,3(2H)-dione
($C_{12}H_{10}BrNO_3$, MM = 296,12) :

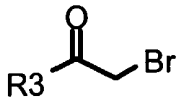


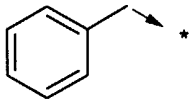
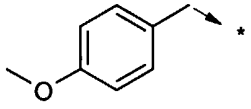
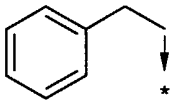
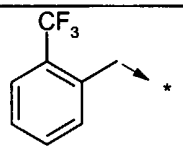
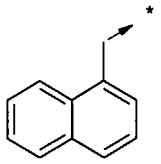
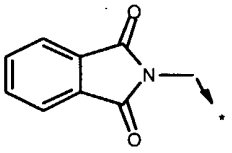
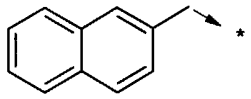
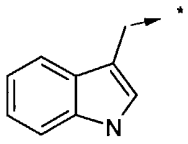
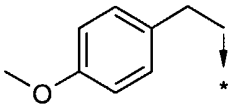
Du chlorure d'oxalyle (5,8 ml ; 66,7 mmol) est ajouté à Pht-β-Ala-OH (9,96g ; 44,5 mmol) dissous dans du dichlorométhane (120ml) et 3 gouttes de diméthylformamide (DMF). Le mélange est agité pendant 3 heures à température ambiante. Après élimination du solvant, le solide blanc est repris dans un mélange 1:1 de tétrahydrofuranne anhydre et d'acétonitrile (200 ml) puis 49 ml de solution de (triméthylsilyl)diazométhane 2M dans l'hexane (97,9 mmol) sont ajoutés goutte à goutte à 0 °C. Les solvants sont éliminés après une nuit sous agitation à 0 °C. Le solide jaune pâle est alors dissous dans du dichlorométhane (60 ml) et 12 ml d'acide hydrobromique acqueux (48%) sont ajoutés goutte à goutte à 0 °C. Le mélange est agité jusqu'à ce que la température remonte à 15 °C et 50 ml de solution saturée en bicarbonate de sodium sont ajoutés. La phase organique est lavée avec de la saumure puis séchée sur du sulfate de sodium. La cristallisation dans du diéthyléther permet d'obtenir un solide blanc (11,39 g ; rendement = 86%).

RMN ^1H (DMSO D6, 100 MHz, δ) : 7,83 (s, 4H) ; 4,36 (s, 2H, CH_2Br) ; 3,8 (t, 2H, J = 7,1 Hz, NCH_2) ; 2,98 (t, 2H, J = 6,9 Hz, CH_2CO).

Préparations 2-11

Les composés suivants ont été préparés de façon analogue à la procédure décrite dans la Préparation 1 :

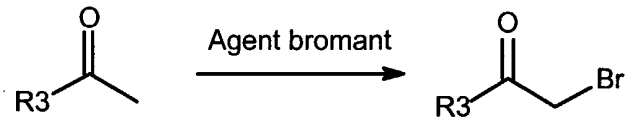


Prép.	R3	Rendt. (%)	Prép.	R3	Rendt. (%)
2*		78	7		67
3*		60	8		51
4*		10	9		38
5*		69	10		22
6*		41	11		67

* Composés déjà décrits dans la littérature.

DEUXIEME METHODE

Le produit de départ est une arylméthylcétone ou une hétéroarylméthylcétone.

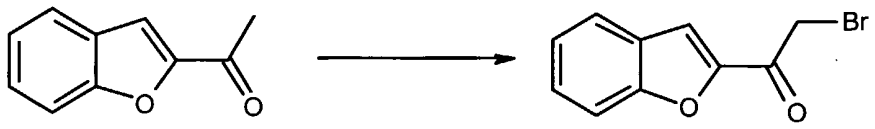


L'arylméthylcétone ou l'hétéroarylméthylcétone de départ est convertie en l'α-bromocétone correspondante en utilisant différents agents bromants :

- $CuBr_2$ (King, L.C. ; Ostrum, G.K. *J. Org. Chem.* **1964**, *29*, 3459-3461) chauffé dans de l'acétate d'éthyle ou du dioxane ;
- du N-bromosuccinimide dans CCl_4 ou de l'acétonitrile aqueux (Morton, H.E.; Leanna, M.R. *Tetrahedron Lett.* **1993**, *34*, 4481-4484) ;
- du brome dans de l'acide acétique glacial ou de l'acide sulfurique ;
- du tribromure de phényltriméthylammonium (Sanchez, J. P. ; Parcell, R. P. *J. Heterocyclic Chem,* **1988**, *25*, 469-474) à 20-80 °C dans un solvant aprotique comme le THF ou du tribromure de tétrabutylammonium (Kajigaeshi, S.; Kakinami, T.; Okamoto, T.; Fujisaki, S. *Bull. Chem. Soc. Jpn.* **1987**, *60*, 1159-1160) dans un mélange dichlorométhane/méthanol à température ambiante ;
- agent bromant sur un support polymère comme du perbromure sur une résine Amberlyst A-26, poly(perbromure d'hydrobromure de vinylpyridinium) (Frechet, J. M. J. ; Farrall, M. J. *J. Macromol. Sci. Chem.* **1977**, 507-514) dans un solvant protique comme le méthanol à environ 20-35 °C pendant environ 2-10 h.

Préparation 12

1-(1-benzofuran-2-yl)-2-bromo-1-éthanone
($C_{10}H_7BrO_2$, MM = 239,06) :

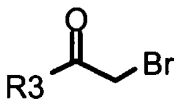


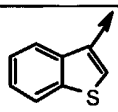
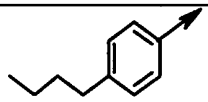
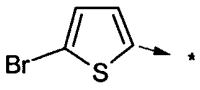
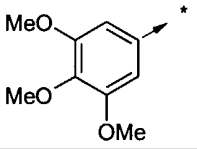
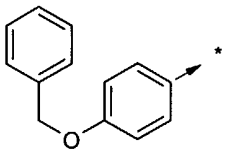
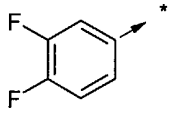
A une solution de (benzofuran-2-yl)méthylcétone (2 g ; 12,5 mmol) dans du méthanol (40 ml) est ajouté un polymère de perbromure d'hydrobromure de pyridine (8,75 g ; 17,5 mmol ; 1,4 équivalent). Le mélange résultant est agité à température ambiante pendant 7 heures et la réaction est arrêtée par filtration. Le méthanol est éliminé sous pression réduite et une addition supplémentaire de diéthyléther permet la cristallisation du produit attendu (3,6 g ; rendement = 60%).

RMN ^1H (DMSO D6, 100 MHz, δ) : 8,09 (s, 1H) ; 7,98 (d, 1H, J = 6,6 Hz) ; 7,75 (d, 1H, J = 8,4 Hz) ; 7,58 (t, 1H, J = 8,4 Hz) ; 7,4 (t, 1H, J = 7 Hz) ; 4,83 (s, 2H, CH_2Br).

Préparations 8-12

Les composés suivants ont été préparés de façon analogue à la procédure décrite dans la Préparation 12 :

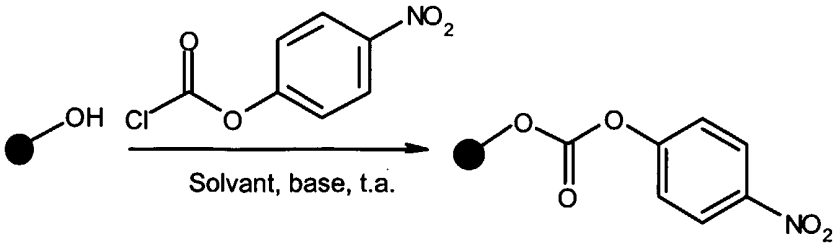


Prép.	R3	Durée de réaction (h)	Rendt. (%)
13*		8	78
14*		2	62
15*		10	56
16*		2	53
17*		3	95
18		8	27

* Composé déjà décrit dans la littérature.

II) Synthèse de 2-arylimino-2,3-dihydrothiazoles *via* synthèse sur phase solide

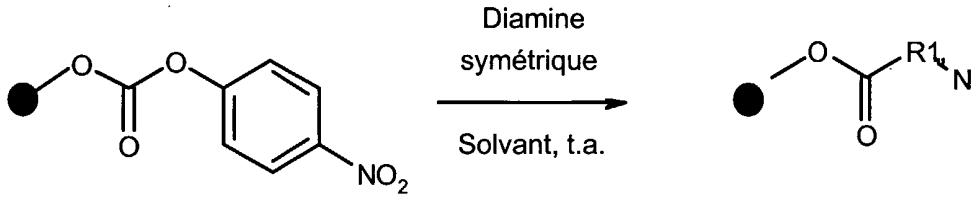
Préparation de la résine p-nitrophénylcarbonate de Wang



Cette résine a été préparée à partir de résine de Wang, acquise auprès de Bachem ou Novabiochem avec une charge supérieure à 0,89 mmol/g, par une procédure générale bien décrite (cf. Bunin, B.A. *The Combinatorial Index*, Academic Press, **1998**, p. 62-63 ; Dressman, B.A. ; Spangle, L.A. ; Kaldor, S.W. *Tetrahedron Lett.* **1996**, *37*, 937-940 ; Hauske, J.R. ; Dorff, P. *Tetrahedron Lett.* **1995**, *36*, 1589-1592; Cao, J. ; Cuny, G.D. ; Hauske, J.R. *Molecular Diversity* **1998**, *3*, 173-179) : de la N-méthylmorpholine ou de la pyridine comme base et du 4-nitrophénylchloroformiate sont successivement ajoutés à une résine de Wang pré-gonflée dans du dichlorométhane (DCM) ou du tétrahydrofuranne (THF) à température ambiante. Le mélange est agité pendant la nuit. La résine est alors lavée successivement avec du THF, du diéthyléther et du DCM puis séchée sous pression réduite à 50 °C pendant une nuit.

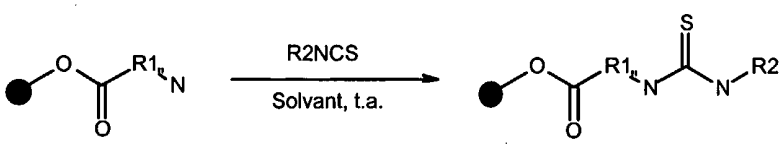
METHODE A

Préparation de diamines symétriques monoprotégées



Procédure générale : comme déjà décrit dans la littérature (Dixit, D.M. ; Leznoff, C.C. *J. C. S. Chem. Comm.* **1977**, 798-799 ; Dixit, D.M. ; Leznoff, C.C. *Israel J. Chem.* **1978**, *17*, 248-252 ; Kaljuste K. ; Unden, A. *Tetrahedron Lett.* **1995**, *36*, 9211-9214 ; Munson, M.C. ; Cook, A.W. ; Josey, J.A. ; Rao, C. *Tetrahedron Lett.* **1998**, *39*, 7223-7226), une résine p-nitrophénylcarbonate de Wang est traitée avec un large excès de diamine symétrique (10-20 équivalents), dans un solvant aprotique comme le DCM ou le DMF, pour donner une résine diamine monoprotégée après agitation pendant la nuit.

Préparation de résines thiourées

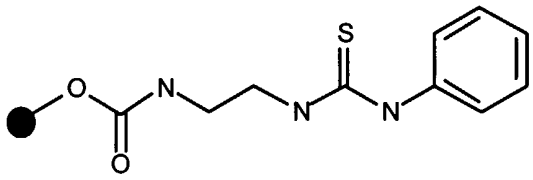


Procédure générale : des isothiocyanates aromatiques et hétéroaromatiques (5-10 équivalents) sont ajoutés (Smith, J. ; Liras, J.L. ; Schneider, S.E. ; Anslyn, E.V. *J.*

Org. Chem. **1996**, *61*, 8811-8818) à des diamines symétriques monoprotégées dans un solvant comme le DCM ou le DMF agité pendant la nuit à température ambiante. Lavée successivement avec du DMF et du DCM, la résine thiourée est isolée puis séchée sous pression réduite à 50 °C pendant une nuit.

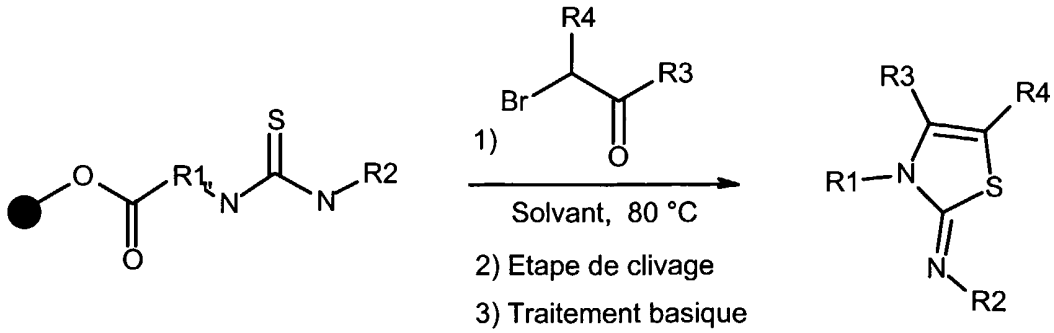
Préparation 19

Résine de Wang carbamate de (phénylaminothioyl)éthyle



A une résine de Wang N-carbamate d'éthylène diamine (2 g ; 1,72 mmol ; 0,86 mmol/g) gonflée dans du DCM (50 ml) est ajouté du phénylisothiocyanate (1 ml ; 8,5 mmol ; 5 éq.). Après agitation une nuit à température ambiante, la résine est lavée successivement avec du DMF (5 x 20 ml) et du DCM (5 x 20 ml). La réussite du couplage est suivie à l'aide du test ninhydrine de Kaiser (Kaiser, E. ; Colescott, R.L. ; Bossinger, C.D. ; Cook, P.I. *Anal. Biochem.* **1970**, *34*, 595-598). Une résine jaune pâle (1,79 g) est obtenue avec une charge de 0,648 mmol/g calculée à partir de l'analyse élémentaire du soufre.

Synthèse de 2-arylimino-2,3-dihydrothiazoles

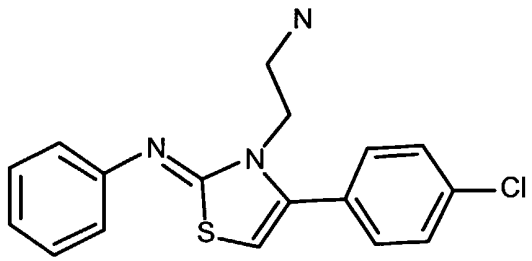


Procédure générale : l'étape de cyclisation régiosélective (Korohoda, M.J. ; Bojarska, A.B. *Polish J. Chem.* **1984**, *58*, 447-453 ; Ragab, F.A. ; Hussein, M.M. ; Hanna, M.M. ; Hassan, G.S. ; Kenawy, S.A. *Egypt. J. Pharm. Sci.* **1993**, *34*, 387-400 ; Hassan, H.Y. ; El-Koussi, N.A. ; Farghaly, Z.S. *Chem. Pharm. Bull.* **1998**, *46*, 863-866) a lieu dans des solvants aprotiques comme le dioxane ou le DMF à 80 °C pendant

2-3 heures entre la résine thiourée et l'α-bromocétone (2-5 équivalents). La résine est alors lavée successivement avec du DMF, du méthanol et du DCM puis séchée sous pression réduite. La résine 2-arylimino-2,3-dihydrothiazole est clivée dans des conditions acides (DCM/acide trifluoroacétique à 50%) pendant 1-2 heures puis rincée avec du DCM. Le solvant est évaporé et la base libre isolée après traitement dans des conditions basiques (solution saturée en hydrogénocarbonate de sodium), extraction avec du DCM ou élution avec du méthanol dans une cartouche d'alumine basique (500 mg, Interchim).

Exemple 1

N-[3-(2-aminoéthyl)-4-(4-chlorophényl)-1,3-thiazol-2(3H)-ylidène]aniline ($C_{17}H_{16}ClN_3S$, MM = 329,86) :

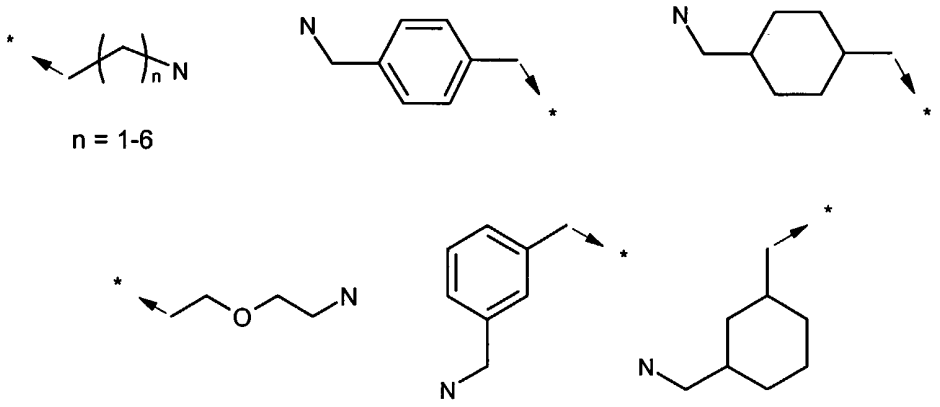


A la résine thiourée préparée ci-dessus (100 mg ; 64,8 µmol ; charge de 0,648 mmol/g) est ajoutée de la 2-bromo-4'-chloroacétophénone (30,2 mg ; 129 µmol ; 2 éq.) dissoute dans du DMF (1 ml). Le mélange est agité 2 heures à 80 °C. La résine est alors successivement lavée avec du DMF (3 x 2 ml), du méthanol (3 x 2 ml) et du DCM (3 x 2 ml). L'étape de libération, effectuée dans 1 ml de mélange DCM/acide trifluoroacétique à 50%, donne après une heure et demie d'agitation une huile qui est éluée avec du méthanol dans une cartouche d'alumine basique (500 mg, Interchim). La base libre est isolée de façon quantitative (21,3 mg) sous forme d'une huile jaune ayant une pureté mesurée par spectrophotométrie UV de 98% à 220 nm.

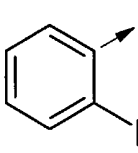
RMN ^1H (DMSO D6, 100 MHz) δ : 7,55 (s, 5H) ; 7,3 (d, 2H, J = 7,1 Hz) ; 6,99 (d, 2H, J = 7,1 Hz) ; 6.21 (s, 1H, H azole) ; 3,74 (t, 2H, J = 6,2 Hz, NCH_2) ; 3,32 (s large, 2H, NH_2) ; 2.72 (t, 2H, J = 6,2 Hz, NCH_2). SM/CL : m/z = 330 $(M+H)^+$.

Une série de 2-arylimino-2,3-dihydrothiazoles a été synthétisée selon la méthode A à l'aide de notre système robotique (ACT MOS 496) :

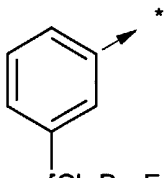
Groupes R1 :



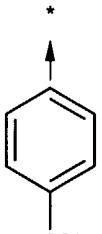
Groupes R2 :



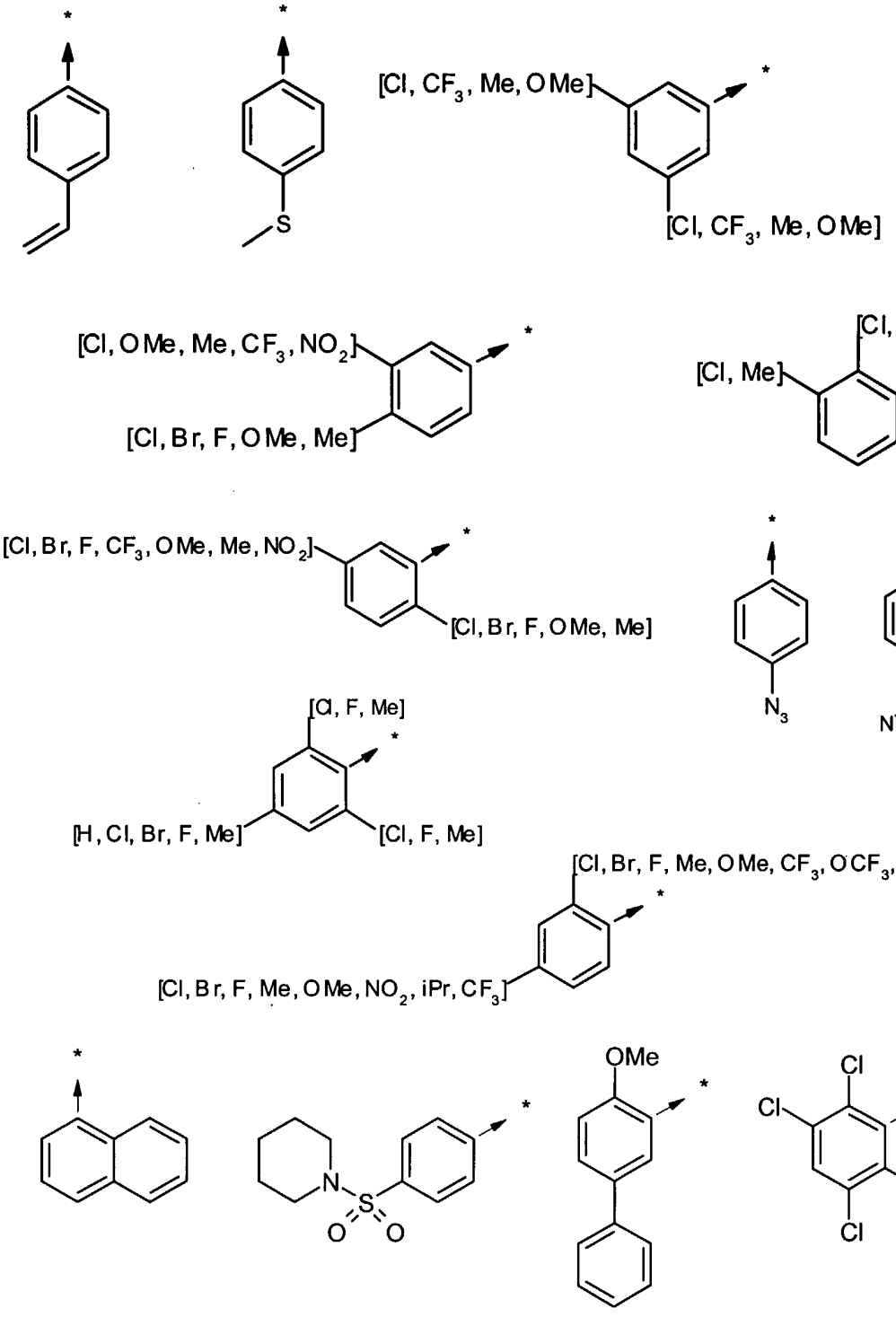
[H, Cl, Br, F, I, OMe, SMe, OEt, CF_3, OCF_3, NO_2, CN, Me, Et, iPr, Ph]

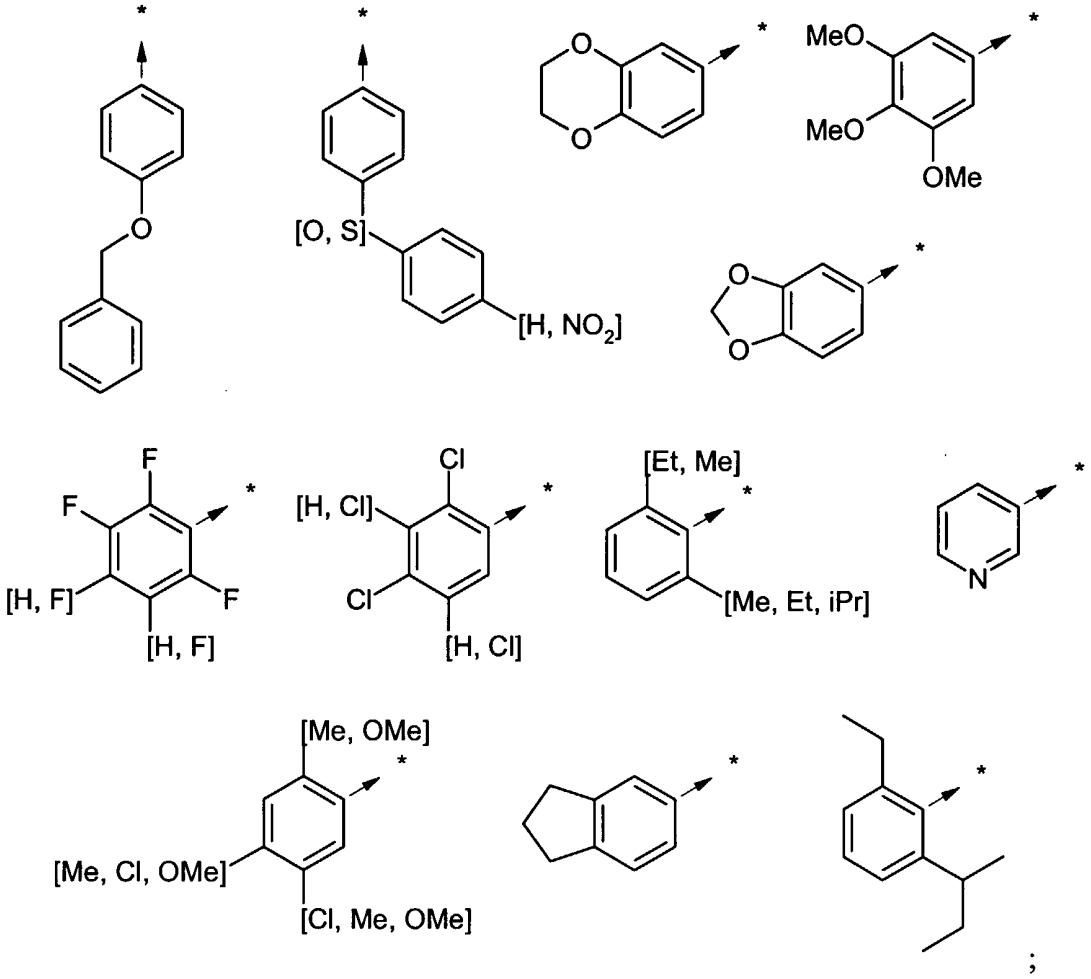


[Cl, Br, F, I, OMe, SMe, CF_3, OCF_3, NO_2, CN, Me, Et, iPr, OCH_2Ph]



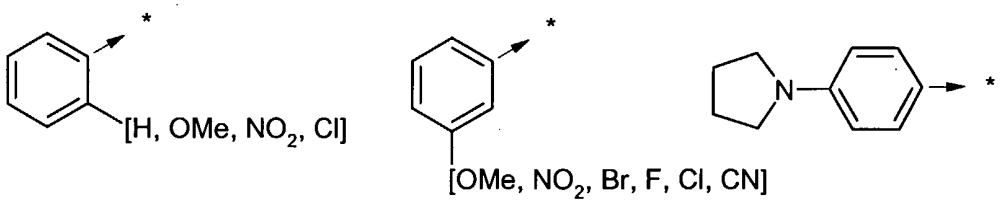
[Cl, Br, F, I, OMe, OEt, CF_3, OCF_3, NO_2, CN, Me, Et, iPr, nBu, tBu, NMe_2, NEt_2]

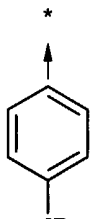

[Cl, CF3, Me, OMe]
[Cl, CF3, Me, OMe]
[Cl, OMe, Me, CF3, NO2]
[Cl, Br, F, OMe, Me]
[Cl, Me]
[Cl, Me]
[Cl, Br, F, CF3, OMe, Me, NO2]
[Cl, Br, F, OMe, Me]
N3
[Cl, F, Me]
[H, Cl, Br, F, Me]
[Cl, F, Me]
[Cl, Br, F, Me, OMe, CF3, OCF3, NO2]
[Cl, Br, F, Me, OMe, NO2, iPr, CF3]
OMe
Cl
Cl
Cl
Cl



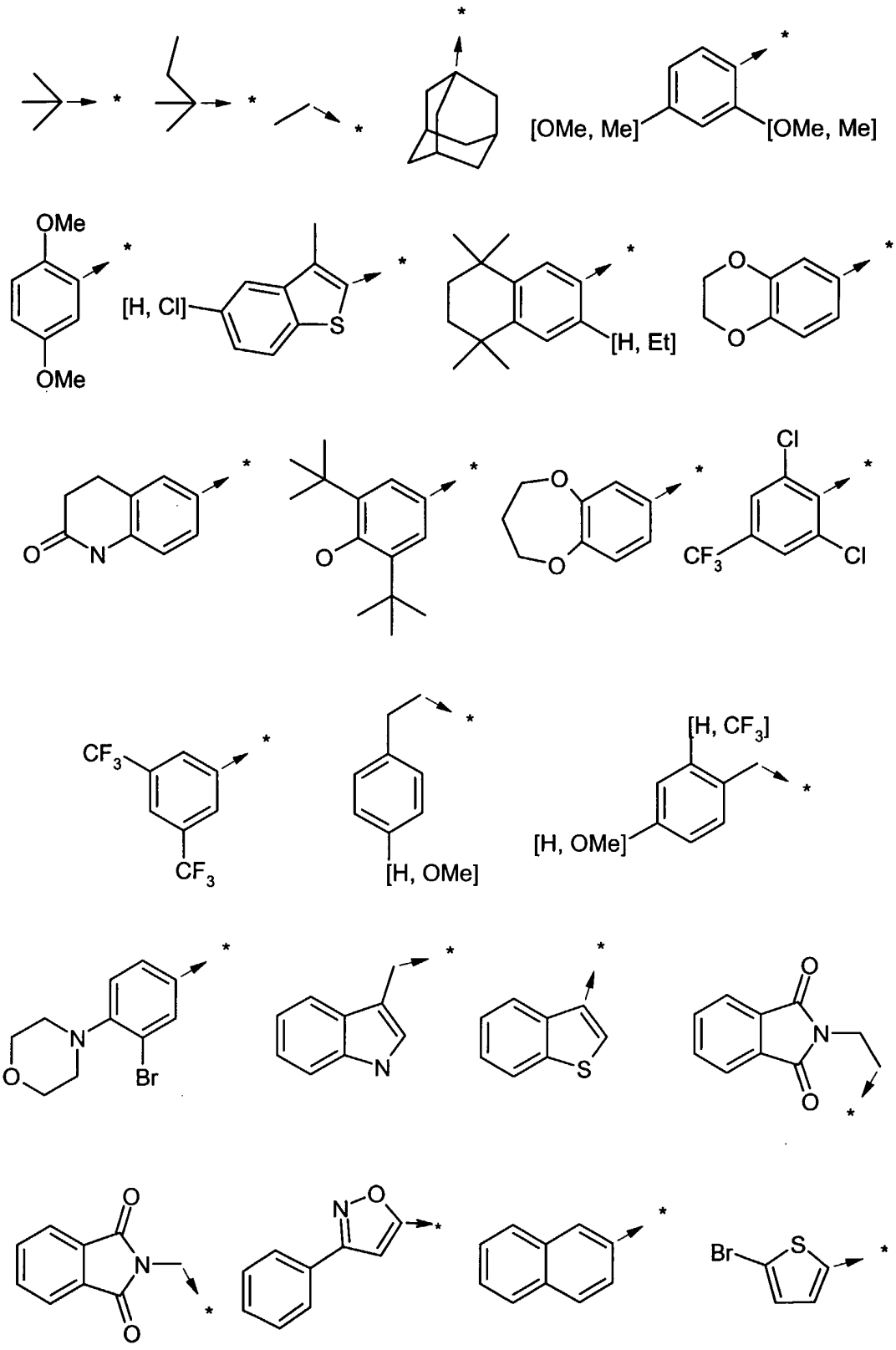
;

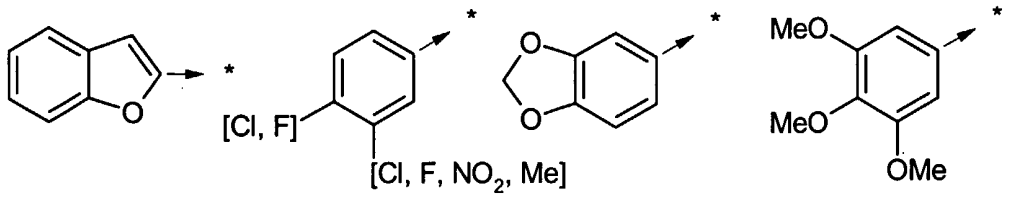
Groupes R3 :

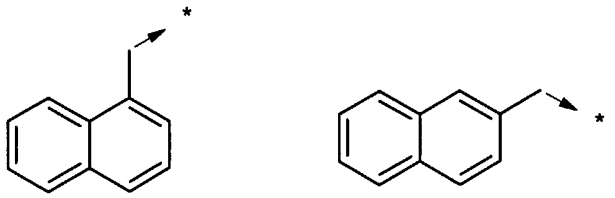




[Br, Cl, F, OMe, Ph, Me, NO_2, N_3, OCF_3, CN, CF_3, NEt_2, nC_4H_9, nC_5H_{11}, OCH_2Ph]

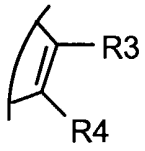

[OMe, Me]
[OMe, Me]
OMe
OMe
[H, Cl]
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[H, Et]
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O
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Cl
CF3
Cl
CF3
CF3
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N
O
Br
S

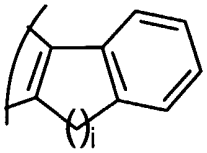




;

R4 représente H, alkyle, aralkyle carbocyclique ou hétérocyclique éventuellement situé sur le radical aryle ;

ou alors le radical 

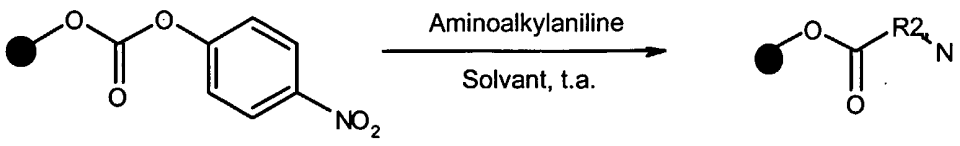
représente un radical de formule générale 

dans laquelle i représente un entier de 1 à 3 ;

étant entendu que pour R4, lorsque le groupe aryle est substitué, il peut l'être de 1 à 5 fois (outre la liaison qui le relie au reste de la molécule) par des radicaux choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle ou alkoxy.

METHODE B

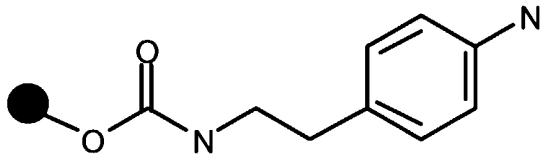
Préparation de résines de Wang carbamates à partir d'aminoalkylanilines



Procédure générale : comme déjà décrit (Hulme, C. ; Peng, J. ; Morton, G. ; Salvino, J.M. ; Herpin, T. ; Labaudiniere, R. *Tetrahedron Lett.* **1998**, *39*, 7227-7230), une résine de Wang p-nitrophénylcarbonate est traitée avec un excès d'aminoalkylaniline (5-10 éq.) dans du DCM ou du DMF et agitée à température ambiante durant une nuit. La résine est lavée successivement avec du DMF, du méthanol et du DCM puis séchée une nuit sous pression réduite à 50 °C.

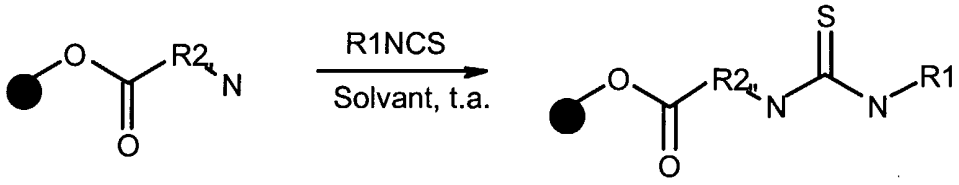
Préparation 20

Résine de Wang carbamate de 4-aminophényléthyle



A une résine de Wang p-nitrophénylcarbonate (4,05 g ; 3,47 mmol ; charge de 0,857 mmol/g) pré-gonflée dans 50 ml de DMF anhydre est ajoutée une solution de 2-(4-aminophényl)éthylamine (2,48 g ; 17,3 mmol ; 5 éq.) dans 30 ml de DMF anhydre. Le mélange est agité à température ambiante durant une nuit et filtré. La résine est lavée successivement avec du DMF (10 x 30 ml), du méthanol (5 x 30 ml) et du DCM (5 x 30 ml). 3,7 g de résine jaune (charge de 0,8 mmol/g calculée à partir de l'analyse élémentaire de l'azote), donnant un test ninhydrine de Kaiser positif, sont isolés après séchage une nuit sous pression réduite à 50 °C.

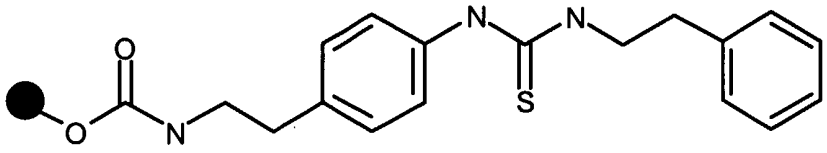
Préparation de résines thiourées avec des isothiocyanates aliphatiques



Procédure générale : des isothiocyanates aliphatiques (5-10 équivalents) sont ajoutés à une résine aminoalkylaniline dans un solvant comme le DCM ou le DMF et agités à température ambiante durant une nuit. Lavée successivement avec du DMF et du DCM, la résine thiourée est isolée et séchée sous pression réduite à 50 °C pendant une nuit.

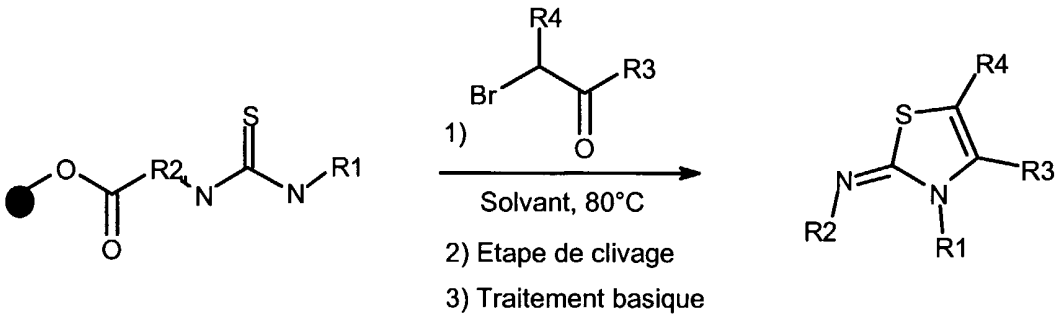
Préparation 21

Résine de Wang carbamate de 4-{[(phényléthylamino)carbothioyl]amino}-phényléthyle



10 ml de DMF anhydre et du phényléthylisothiocyanate (624 µl, 4 mmol, 10 éq.) sont ajoutés sous atmosphère d'argon à la résine précédemment décrite (0,5 g ; 0,4 mmol ; charge de 0,8 mmol/g). L'agitation durant une nuit à température ambiante donne un test ninhydrine de Kaiser négatif. La résine est alors successivement lavée avec du DMF (5 x 20 ml) et du DCM (5 x 20 ml). Un séchage sous pression réduite à 50 °C donne 488 mg de résine avec une charge de 0,629 mmol/g calculée à partir de l'analyse élémentaire du soufre.

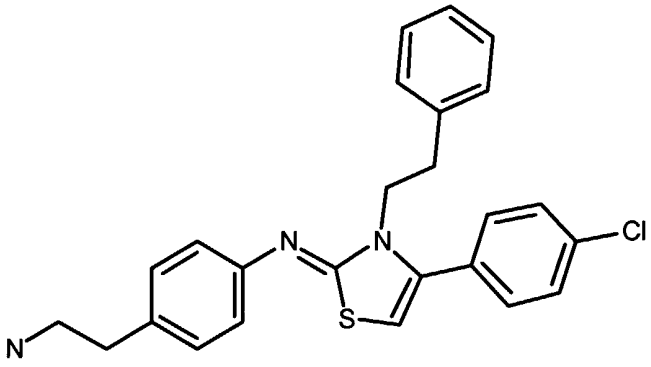
Synthèse de 2-arylimino-2,3-dihydrothiazoles



Procédure générale : l'étape de cyclisation a lieu dans des solvants aprotiques comme le dioxane ou le DMF à 80 °C pendant 2 heures entre la résine thiourée et l'α-bromocétone (2-5 équivalents). La résine est alors successivement lavée avec du DMF, du méthanol et du DCM puis séchée sous pression réduite. La résine iminothiazole est clivée par traitement dans des conditions acides (DCM/acide trifluoroacétique à 50%) pendant 1-2 heures puis rincée avec du DCM. Le solvant est évaporé et la base libre isolée après extraction dans des conditions basiques (solution saturée en hydrogénocarbonate de sodium), extraction avec du DCM ou élution avec du méthanol dans une cartouche d'alumine basique (500 mg, Interchim).

Exemple 2

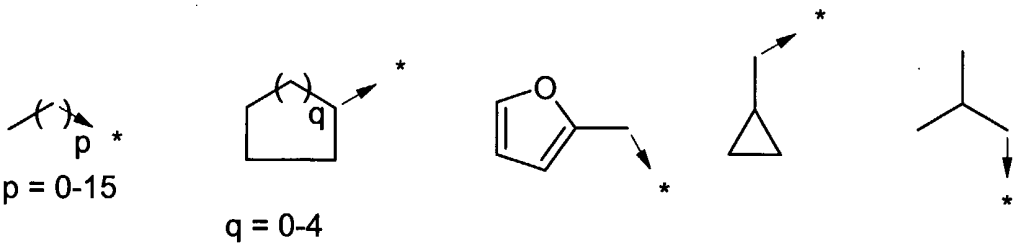
4-(2-aminoéthyl)-N-[4-(4-chlorophényl)-3-phénéthyl-1,3-thiazol-2(3H)-ylidène]aniline ($C_{25}H_{24}ClN_3S$, MM = 434,01) :

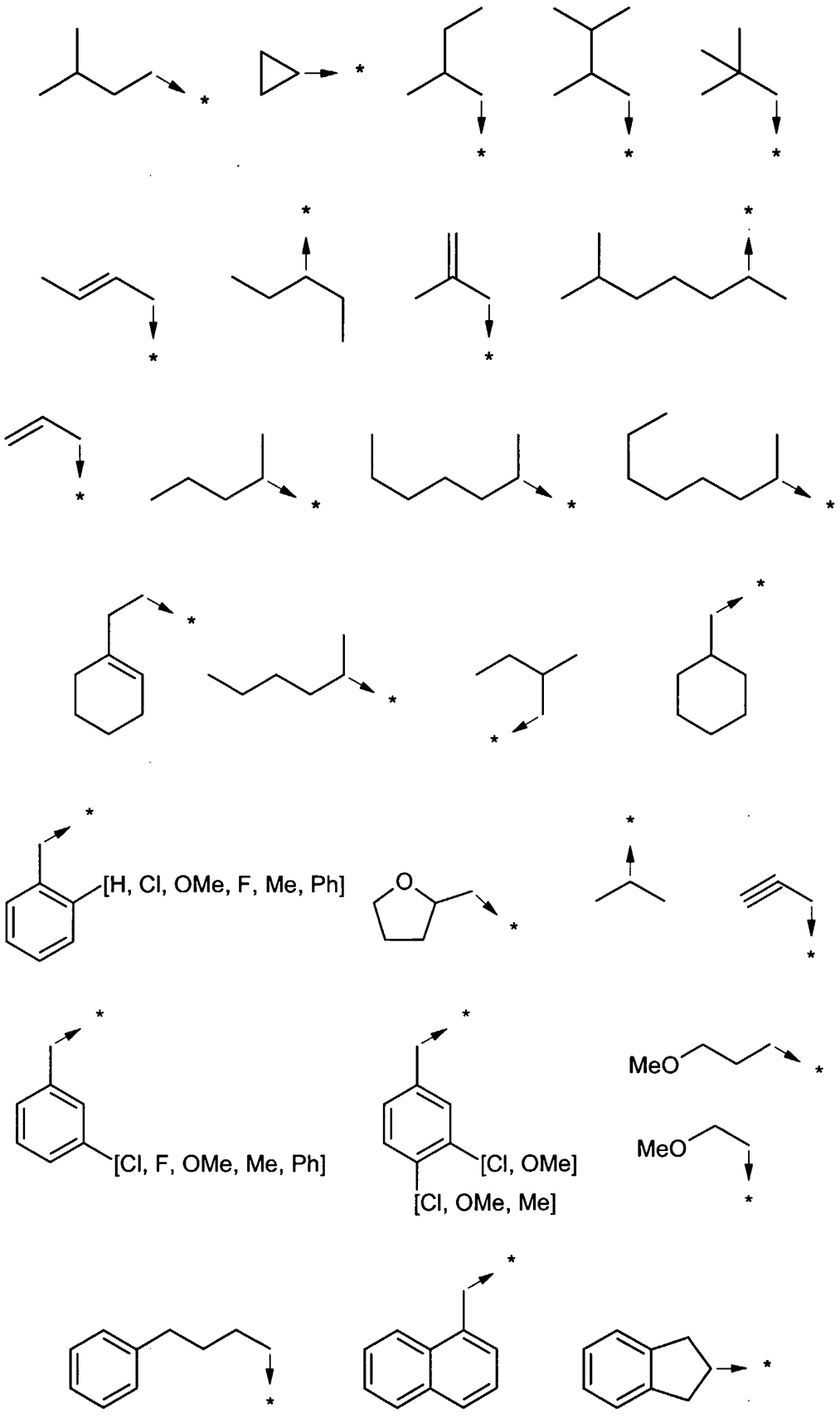


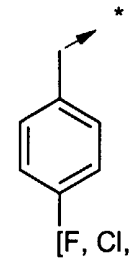
100 mg (62,9 µmol, charge de 0,629 mmol/g) de résine thiourée et de la 2-bromo-4'-chloroacétophénone (30 mg ; 125,8 µmol ; 2 éq.) sont dissous dans 1 ml de DMF et chauffés à 80 °C pendant 2 heures. La résine est alors lavée successivement avec du DMF (5 x 1 ml), du méthanol (5 x 1 ml) et du DCM (5 x 1 ml). La résine est agitée dans 1 ml de mélange DCM/acide trifluoroacétique à 50% pendant une heure et demie à température ambiante. La résine est rincée avec du DCM (5 x 1 ml) et le filtrat évaporé sous pression réduite. Le résidu, dissous dans du méthanol, est élué dans une cartouche d'alumine basique (500 mg, Interchim) pour donner quantitativement (27,3 mg) le produit attendu sous forme d'un solide (pureté UV de 97% à 220 nm).
RMN ^1H (DMSO D6, 100 MHz) δ : 7,9 (s large, 2H, NH_2) ; 7,53 (d, 2H, J = 8,5 Hz) ; 7,32-7,15 (m, 7H) ; 7,08-6,9 (m, 4H) ; 6,37 (s, 1H, H azole) ; 4,07 (m, 2H, NCH_2) ; 3,03 (m, 2H, NCH_2) ; 2,88 (m, 4H). SM/LC : m/z = 435 $(M+H)^+$.

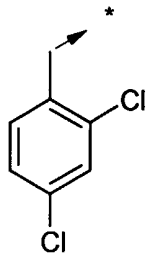
Une série de 2-arylimino-2,3-dihydrothiazoles a été synthétisée selon la méthode B avec notre système robotique (ACT MOS 496) :

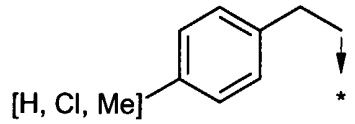
- Groupes R1

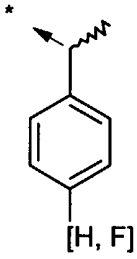


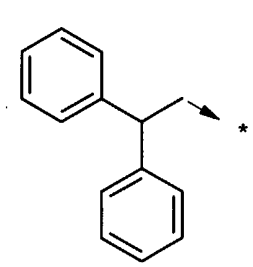

[H, Cl, OMe, F, Me, Ph]
O
[Cl, F, OMe, Me, Ph]
[Cl, OMe]
[Cl, OMe, Me]
MeO
MeO

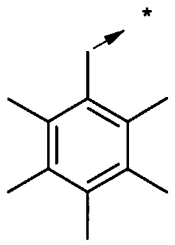


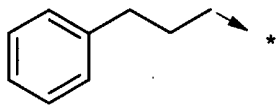


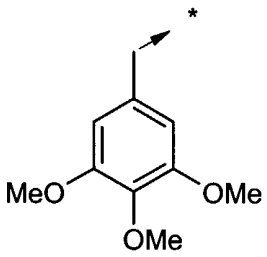


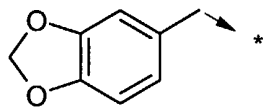


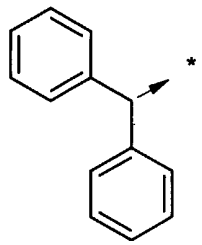


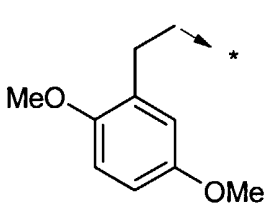


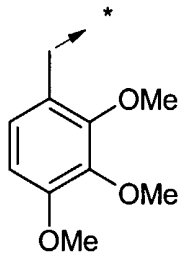


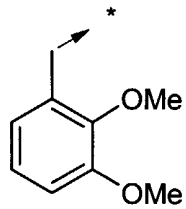


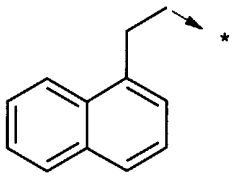


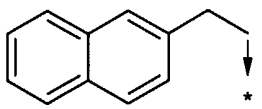


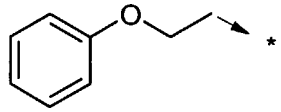




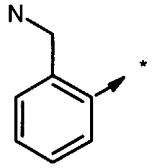


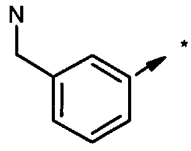


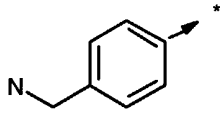


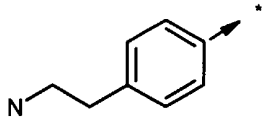


- Groupes R2





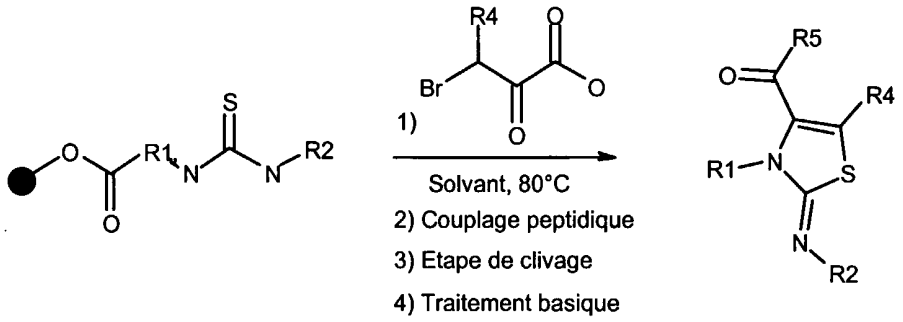




- Groupes R3 et R4 comme ceux de la méthode A

METHODE C

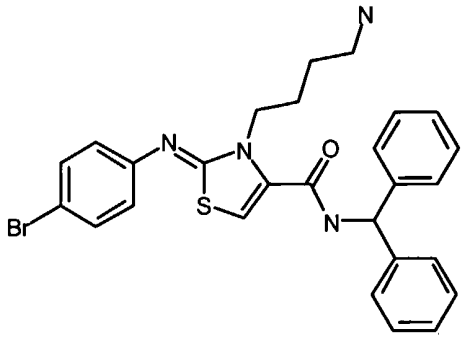
Synthèse de 2-arylimino-1,3-thiazole-4(3*H*)-carboxamides



Procédure générale : une étape de cyclisation régiosélective à l'aide d'acide α-bromopyruvique (2-5 éq.) est effectuée à partir de la résine thiourée préparée dans la méthode A dans des solvants aprotiques comme le dioxane ou le DMF à 80 °C durant 2-3 heures. La résine est alors successivement lavée avec du DMF, du méthanol et du DCM puis séchée sous pression réduite. Le couplage peptidique (Knorr, R. ; Trzeciak, A. ; Bannwarth, W. ; Gillessen, D. *Tetrahedron Lett.* **1989**, *30*, 1927-1930) a lieu dans le DMF à température ambiante pendant 1-24 heures avec différents agents de couplage classiques (4-5 éq.) comme le dicyclohexylcarbodiimide (DCC), le diisopropylcarbodiimide (DIC), un mélange DIC/N-hydroxybenzotriazole (HOBt), l'hexafluorophosphate de benzotriazolyloxytris(diméthylamino)phosphonium (PyBOP), l'hexafluorophosphate de 2-(1*H*-benzotriazol-1-yl)-1,1,3,3-tétraméthyluronium (HBTU) ou le tétrafluoroborate de 2-(1*H*-benzotriazol-1-yl)-1,1,3,3-tétraméthyluronium (TBTU) et des composés aminés (4-5 éq.). La résine 2-arylimino-1,3-thiazole-4(3*H*)-carboxamide est clivée par traitement dans des conditions acides (DCM/acide trifluoroacétique à 50%) pendant 1-2 heures puis rinçage avec du DCM. Le solvant est évaporé et la base libre isolée après traitement dans des conditions basiques (solution saturée en hydrogénocarbonate de sodium), extraction avec du DCM ou élution avec du méthanol dans une cartouche d'alumine basique (500 mg, Interchim).

Exemple 3

3-(4-aminobutyl)-N-benzhydryl-2-[(4-bromophényl)imino]-1,3-thiazole-4(3H)-carboxamide
($C_{27}H_{27}BrN_4OS$, MM = 535,51) :

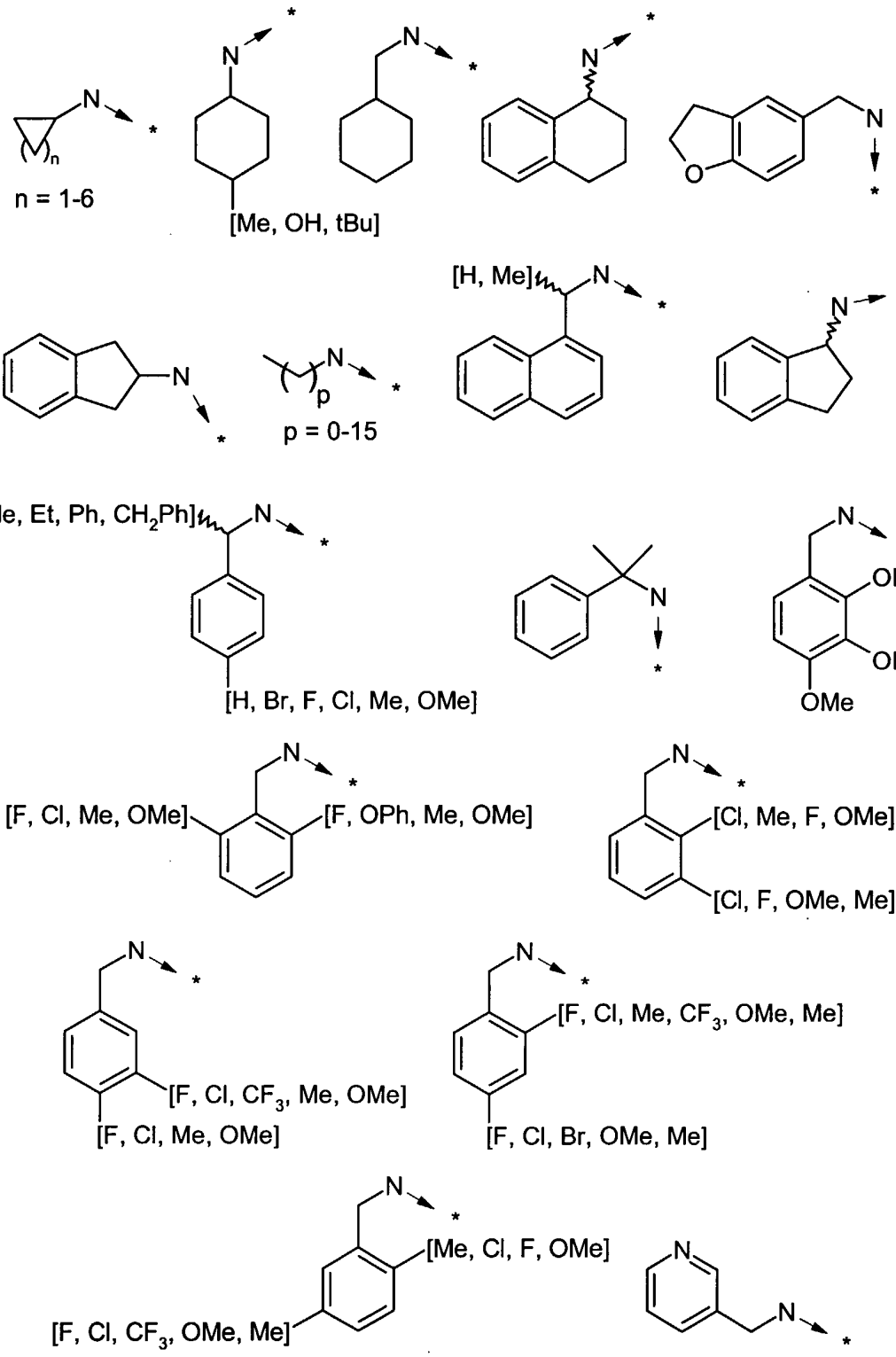


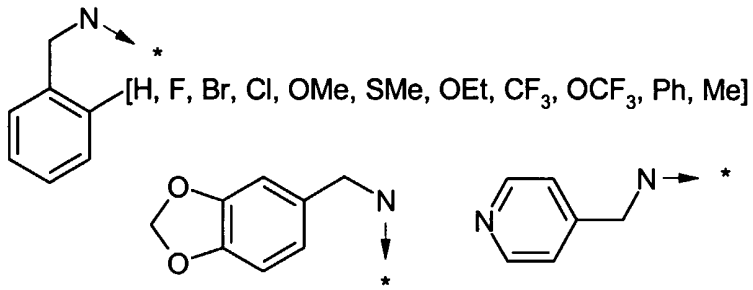
50 mg (27,5 µmol, charge de 0,55 mmol/g) de résine acide carboxylique est activée pendant 15 minutes avec 14,8 mg (0,11 mmol, 4 éq.) de N-hydroxybenzotriazole et 35,3 mg (0,11 mmol, 4 éq.) de TBTU dans 800 µl de DMF anhydre. 20,7 mg (0,11 mmol, 4 éq.) d'aminodiphénylméthane dissous dans 200 µl de DMF anhydre sont alors ajoutés et la résine est filtrée après agitation durant une nuit à température ambiante. Un lavage séquentiel avec du DMF (5 x 1 ml), du méthanol (5 x 1 ml) et du DCM (5 x 1 ml) donne une résine qui est traitée pendant une heure et demie dans des conditions acides (DCM/acide trifluoroacétique à 50 %). La résine est rincée avec du DCM (5 x 1 ml) et le filtrat évaporé sous pression réduite. Le résidu, repris dans du méthanol, est élué dans une cartouche d'alumine basique (500 mg, Interchim) pour donner un solide jaune pâle (8,2 mg ; rendement de 55,7 % ; pureté UV de 94 % à 220 nm).
RMN ^1H (DMSO D6, 100 MHz, δ) : 9,6 (d ; 1H ; J = 8,6Hz ; NH) ; 7,49 (d ; 2H ; J = 8,6 Hz) ; 7,35 (s ; 10H) ; 6,92 (s ; 1H ; H azole) ; 6,91 (d ; 2H ; J = 8,5 Hz) ; 6,27 (d ; 1H ; J = 8,5 Hz ; NHCH) ; 4,02 (m ; 2H ; NCH_2) ; 3,45 (m large ; 2H+2H ; NH_2 et NCH_2) ; 1,55–1,24 (m large ; 4H). SM/CL : m/z = 535 (M+H).

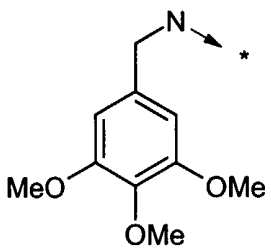
Une série de 2-arylimino-1,3-thiazole-4(3*H*)-carboxamides a été synthétisée selon la méthode C à l'aide de notre système robotique (ACT MOS 496) :

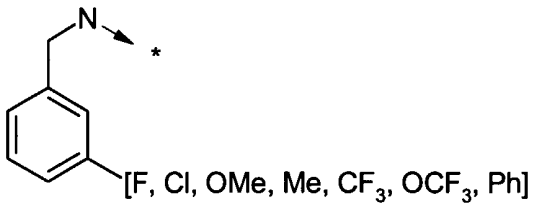
- Groupes R1 et R2 déjà décrits dans la méthode A ;
- R3 = -CO-R5 ;
- R4 = H ;

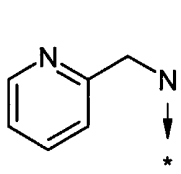
- Groupes R5

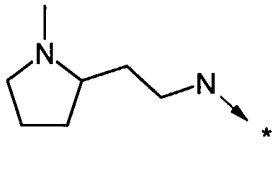

n = 1-6
[Me, OH, tBu]
[H, Me]
p = 0-15
[Me, Et, Ph, CH2Ph]
[H, Br, F, Cl, Me, OMe]
OMe
OMe
OMe
[F, Cl, Me, OMe]
[F, OPh, Me, OMe]
[Cl, Me, F, OMe]
[Cl, F, OMe, Me]
[F, Cl, CF3, Me, OMe]
[F, Cl, Me, OMe]
[F, Cl, Me, CF3, OMe, Me]
[F, Cl, Br, OMe, Me]
[Me, Cl, F, OMe]
[F, Cl, CF3, OMe, Me]

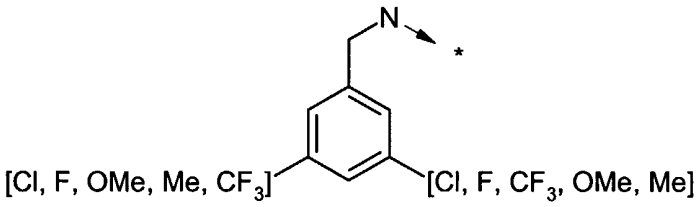

[H, F, Br, Cl, OMe, SMe, OEt, CF3, OCF3, Ph, Me]

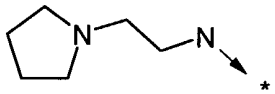

MeO
OMe
OMe

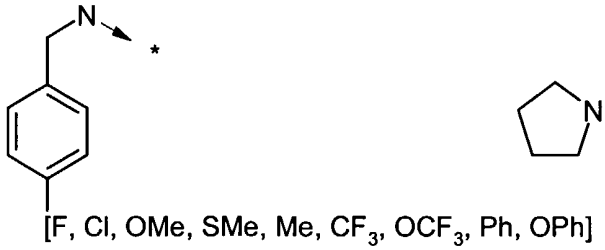

[F, Cl, OMe, Me, CF3, OCF3, Ph]

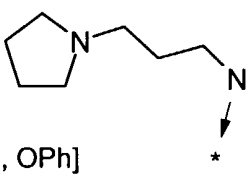


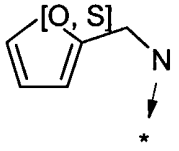


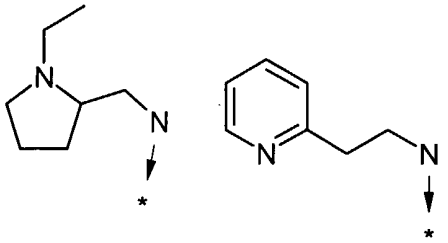

[Cl, F, OMe, Me, CF3]
[Cl, F, CF3, OMe, Me]

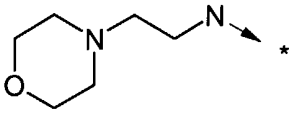


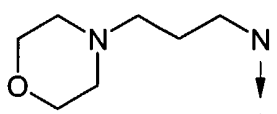

[F, Cl, OMe, SMe, Me, CF3, OCF3, Ph, OPh]

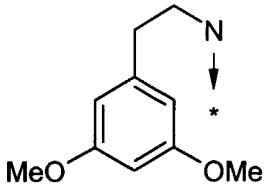


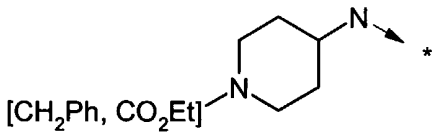

[O, S]

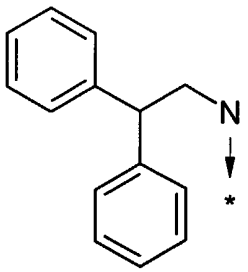


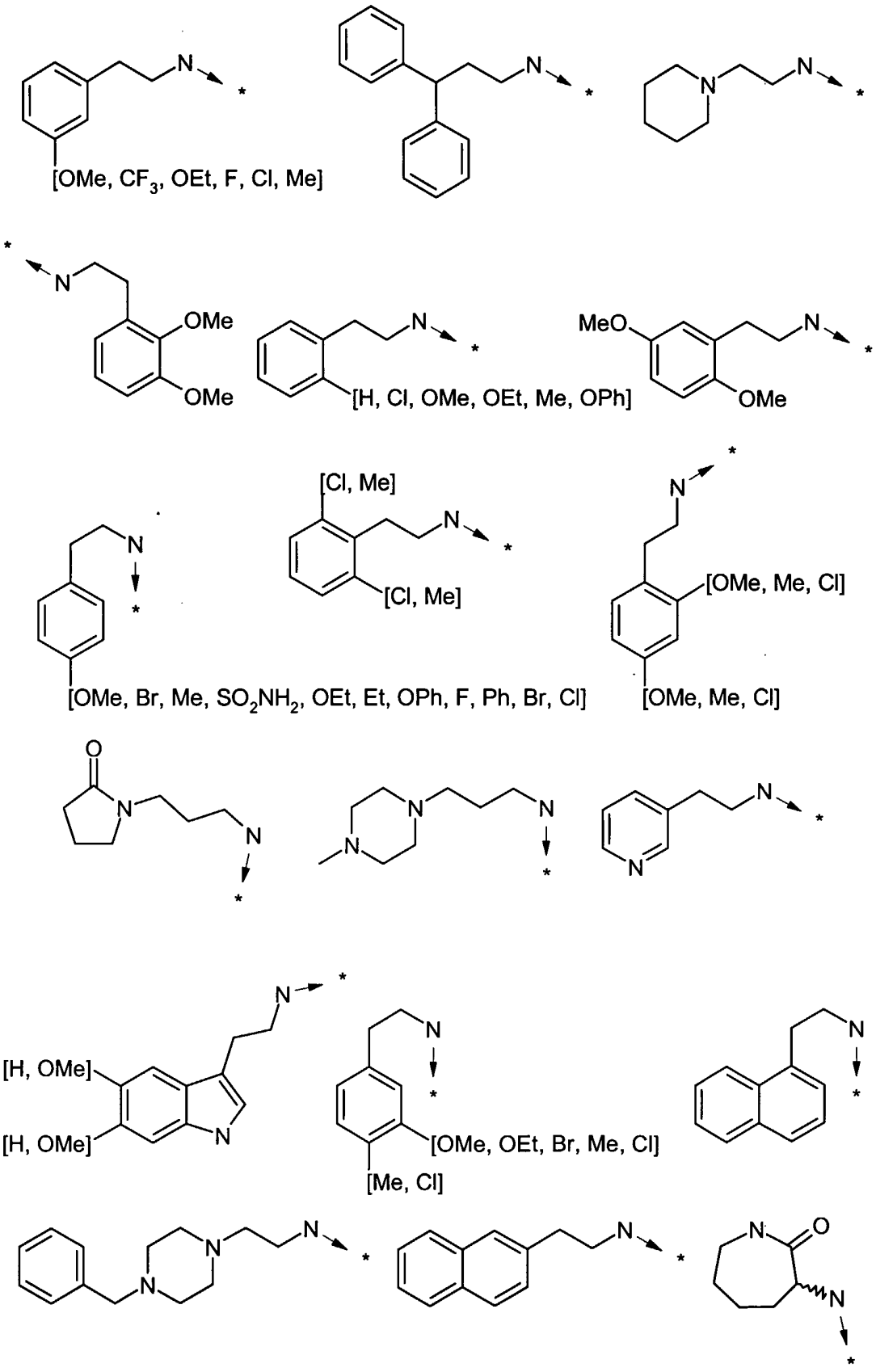


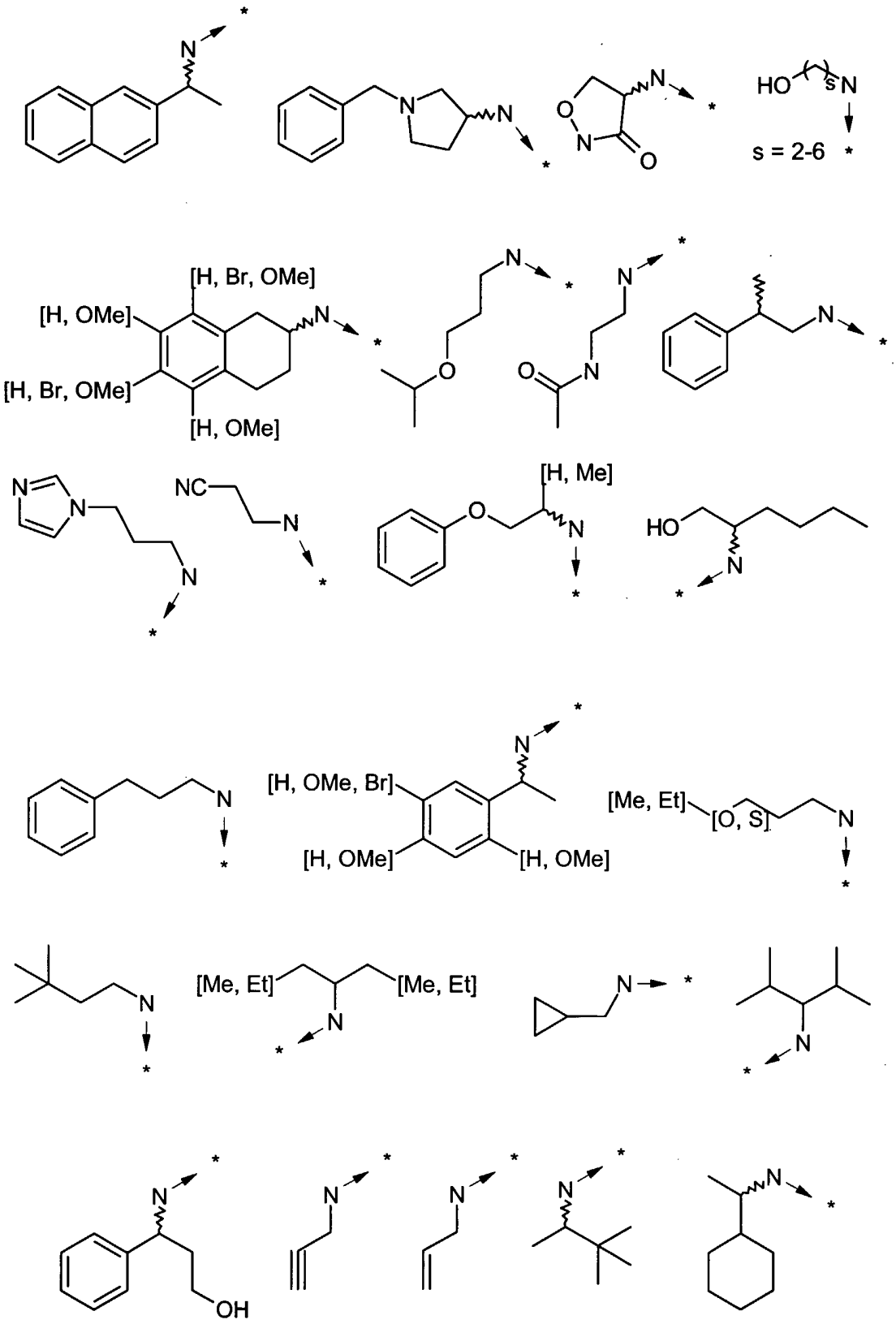


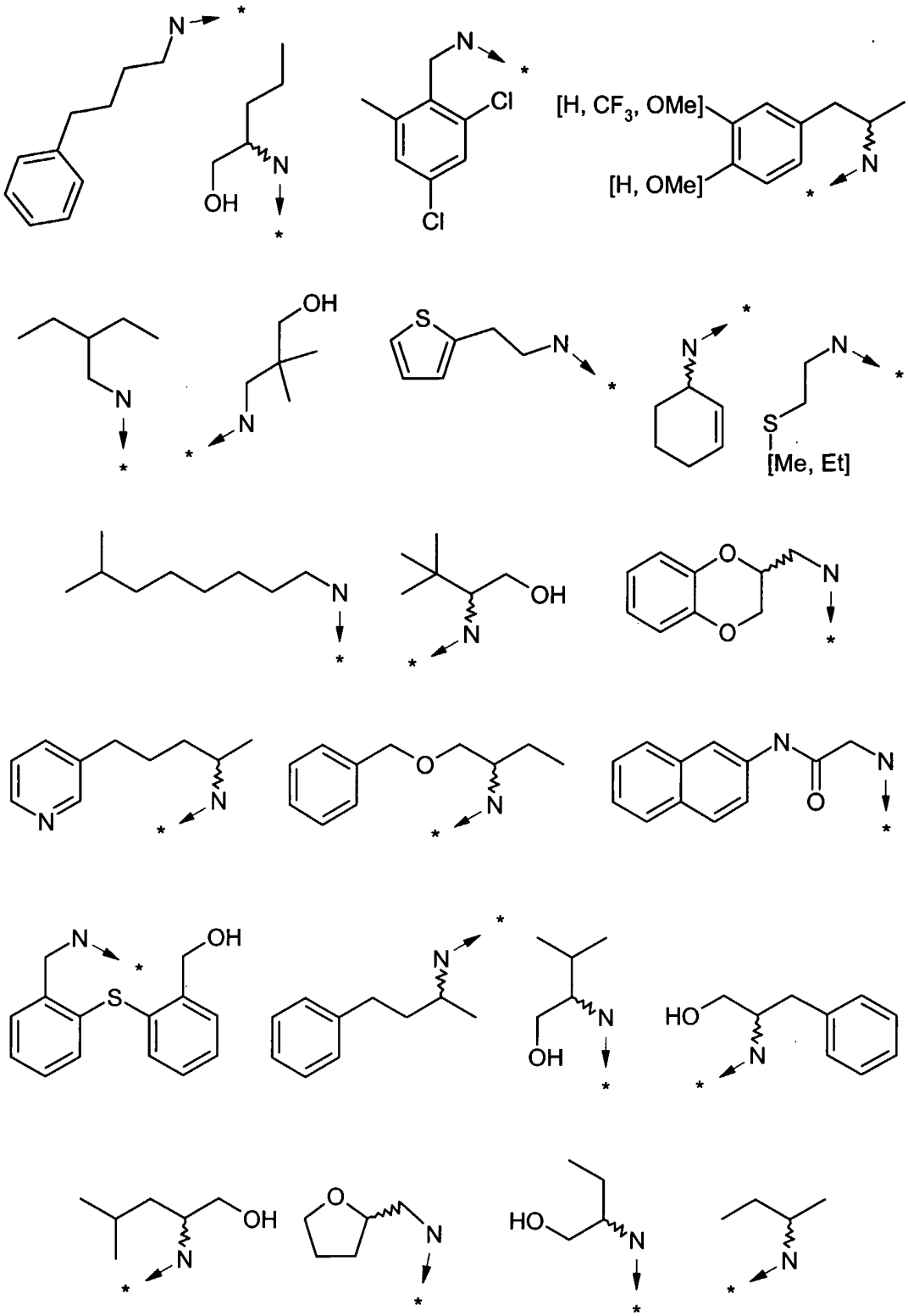

MeO
OMe

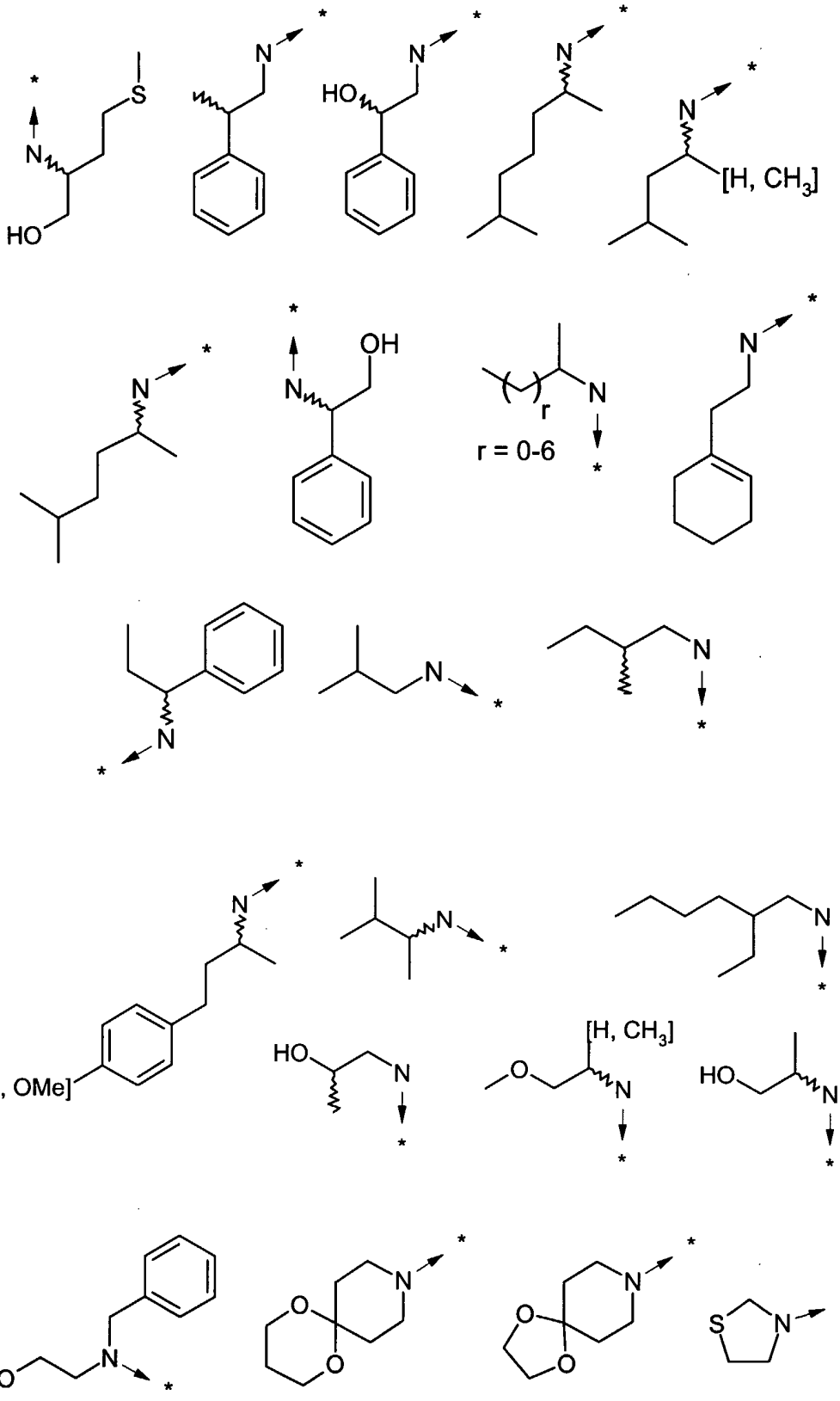

[CH2Ph, CO2Et]

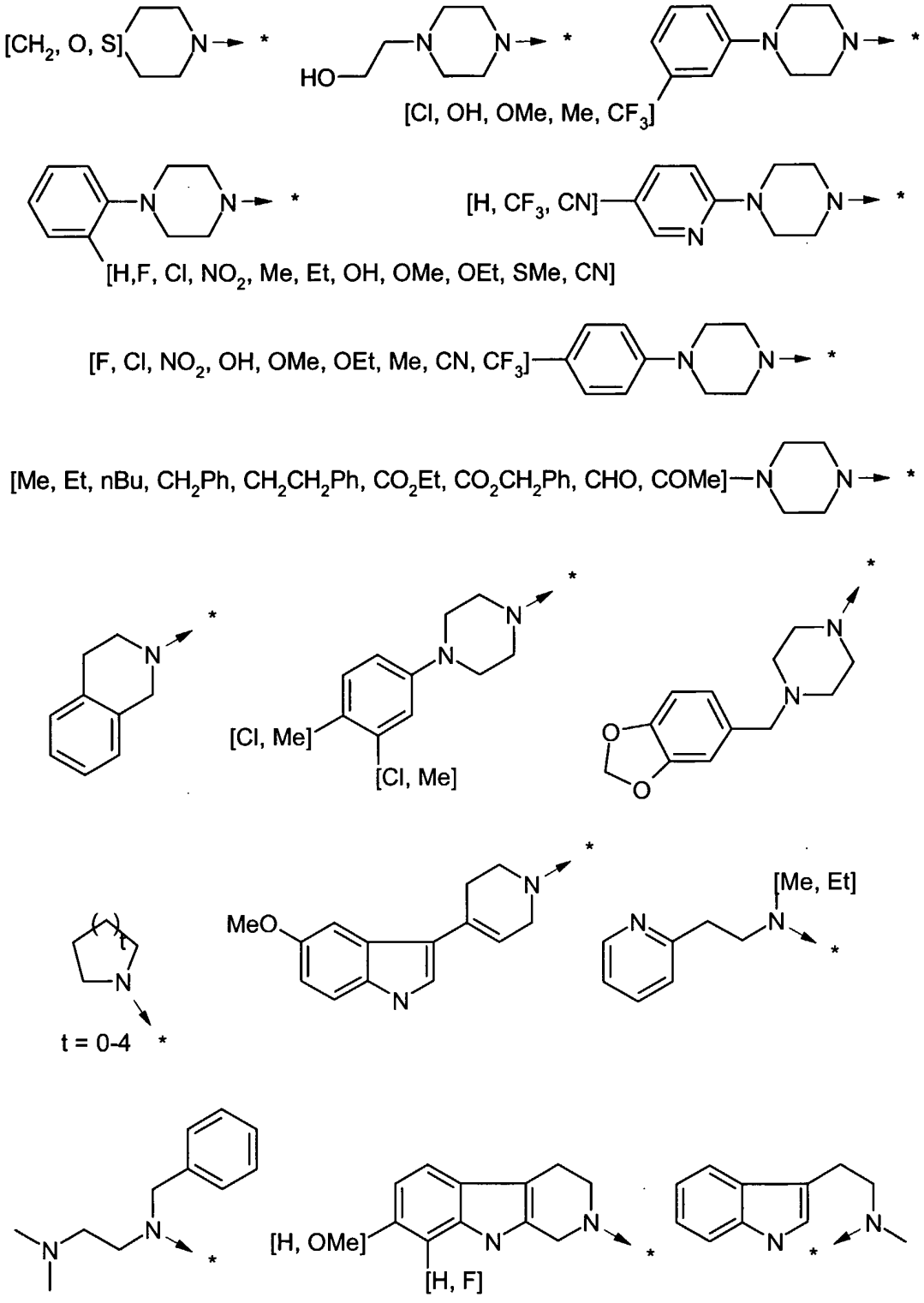


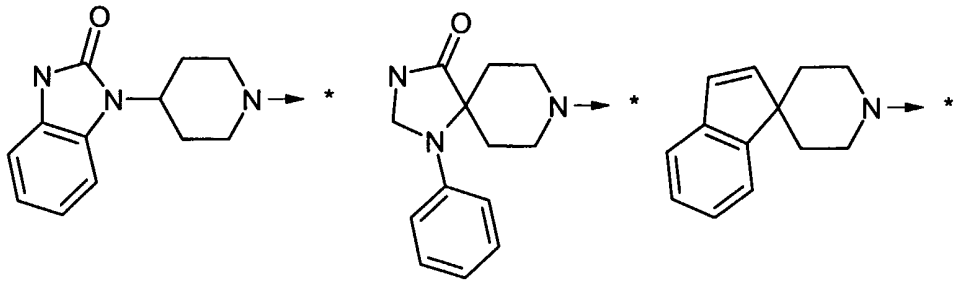

[OMe, CF3, OEt, F, Cl, Me]
OMe
OMe
[H, Cl, OMe, OEt, Me, OPh]
MeO
OMe
[Cl, Me]
[Cl, Me]
[OMe, Br, Me, SO2NH2, OEt, Et, OPh, F, Ph, Br, Cl]
[OMe, Me, Cl]
[OMe, Me, Cl]
O
[H, OMe]
[H, OMe]
[OMe, OEt, Br, Me, Cl]
[Me, Cl]
O

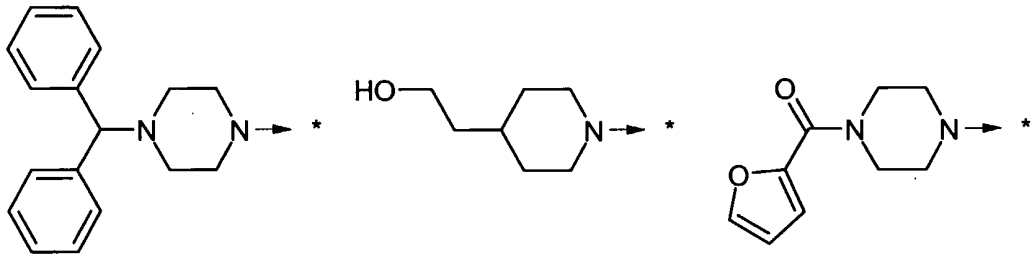

HO
s = 2-6
[H, Br, OMe]
[H, OMe]
[H, Br, OMe]
[H, OMe]
NC
[H, Me]
HO
[H, OMe, Br]
[H, OMe]
[H, OMe]
[Me, Et]
[O, S]
[Me, Et]
[Me, Et]
OH

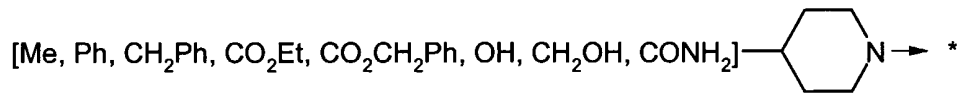

[H, CF3, OMe]
[H, OMe]
[Me, Et]


HO
[H, CH3]
OH
r = 0-6
[H, OMe]
[H, CH3]

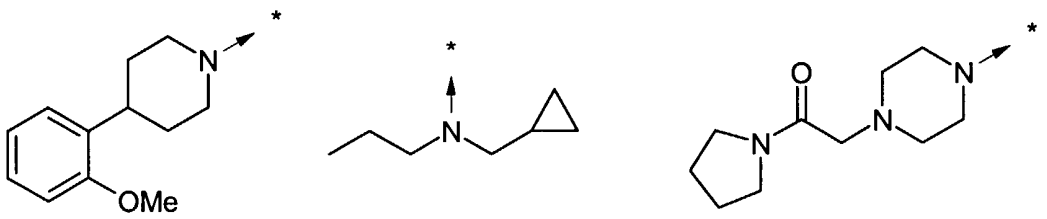

[CH2, O, S]
HO
[Cl, OH, OMe, Me, CF3]
[H, CF3, CN]
[H,F, Cl, NO2, Me, Et, OH, OMe, OEt, SMe, CN]
[F, Cl, NO2, OH, OMe, OEt, Me, CN, CF3]
[Me, Et, nBu, CH2Ph, CH2CH2Ph, CO2Et, CO2CH2Ph, CHO, COMe]
[Cl, Me]
[Cl, Me]
MeO
[Me, Et]
t = 0-4
[H, OMe]
[H, F]



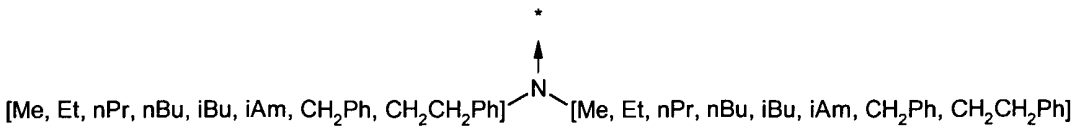




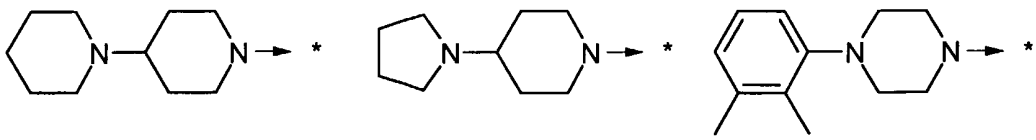
[Me, Ph, CH_2Ph, CO_2Et, CO_2CH_2Ph, OH, CH_2OH, $CONH_2$]

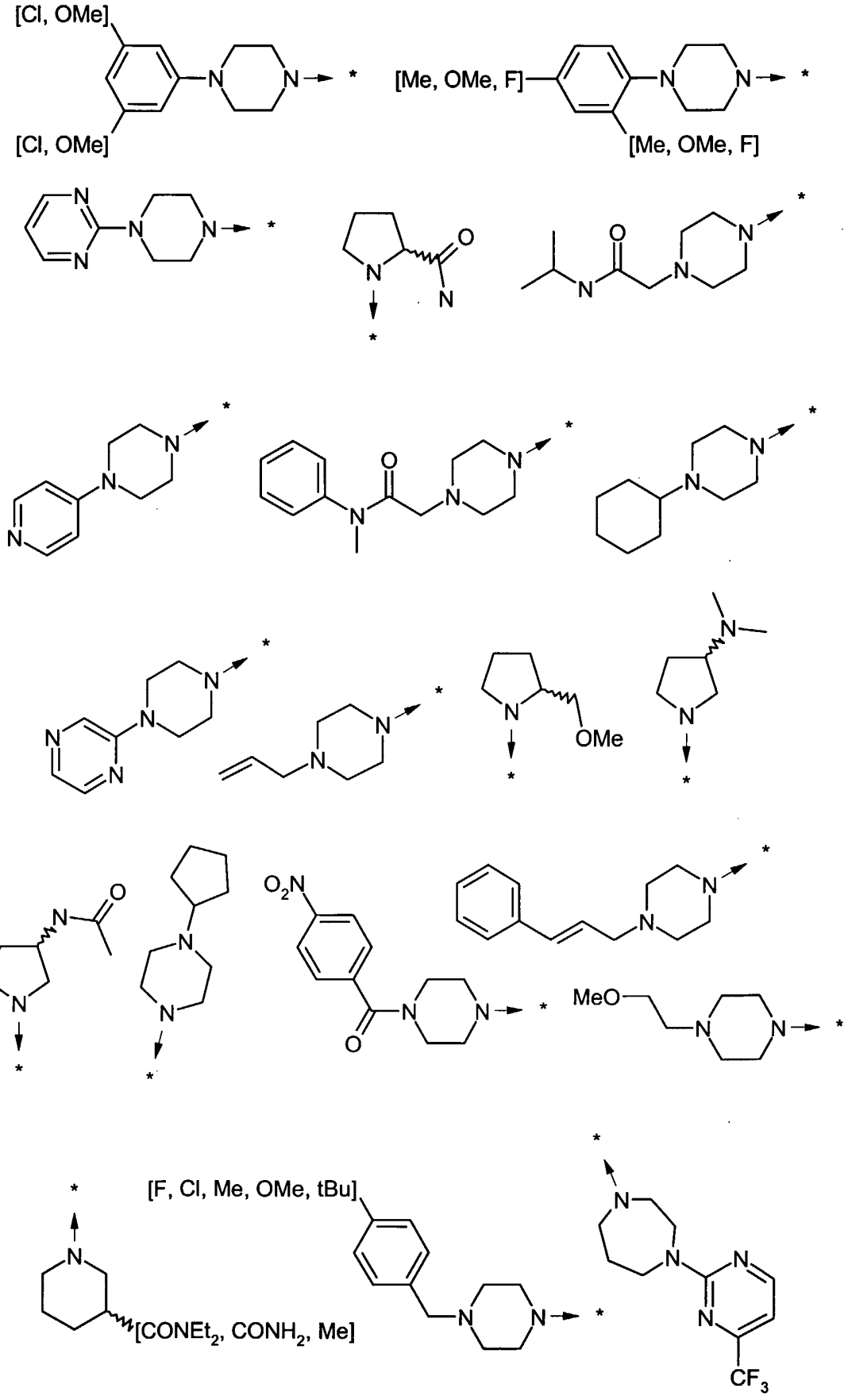


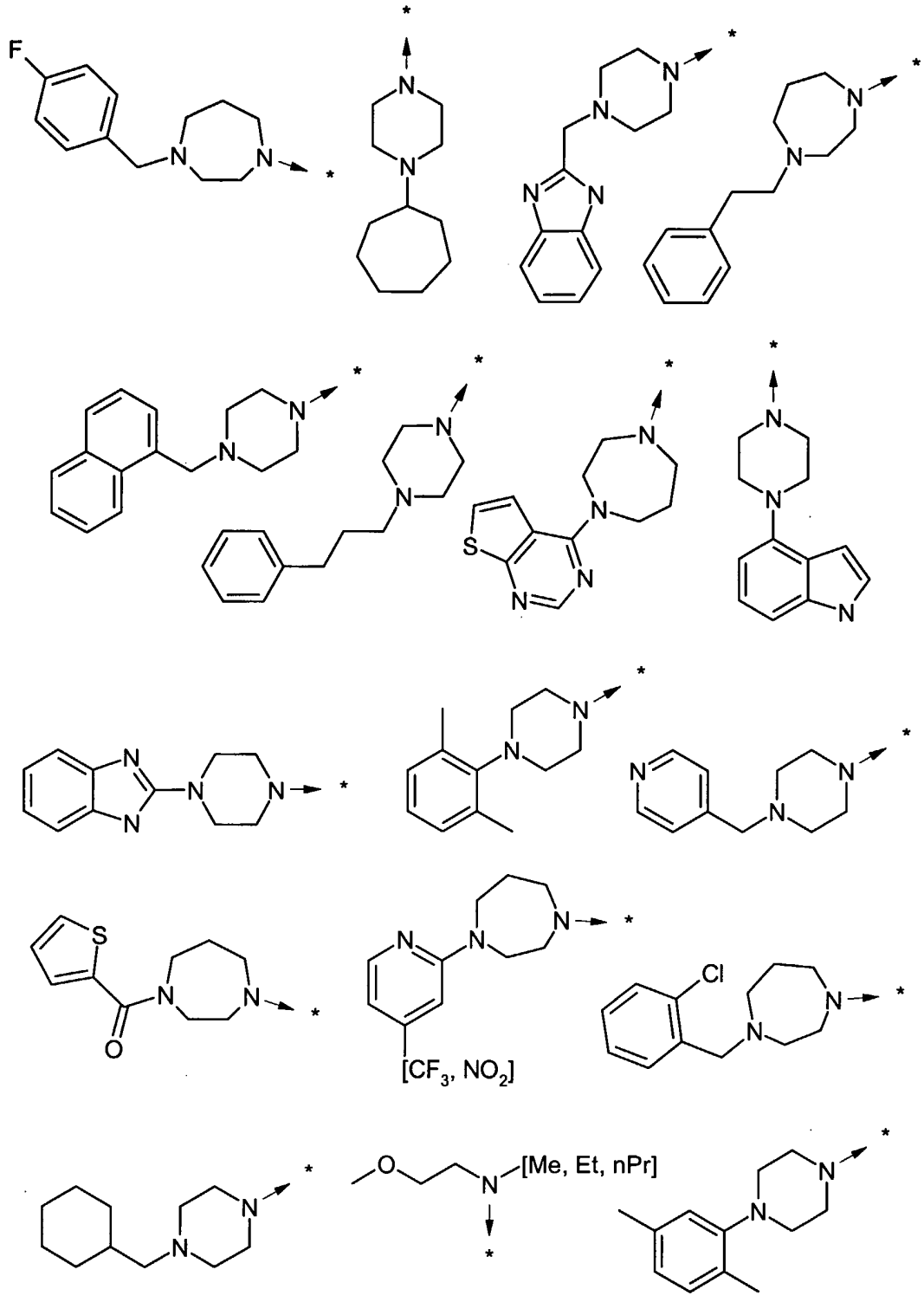
[Me, CH_2Ph, COMe, CHO]

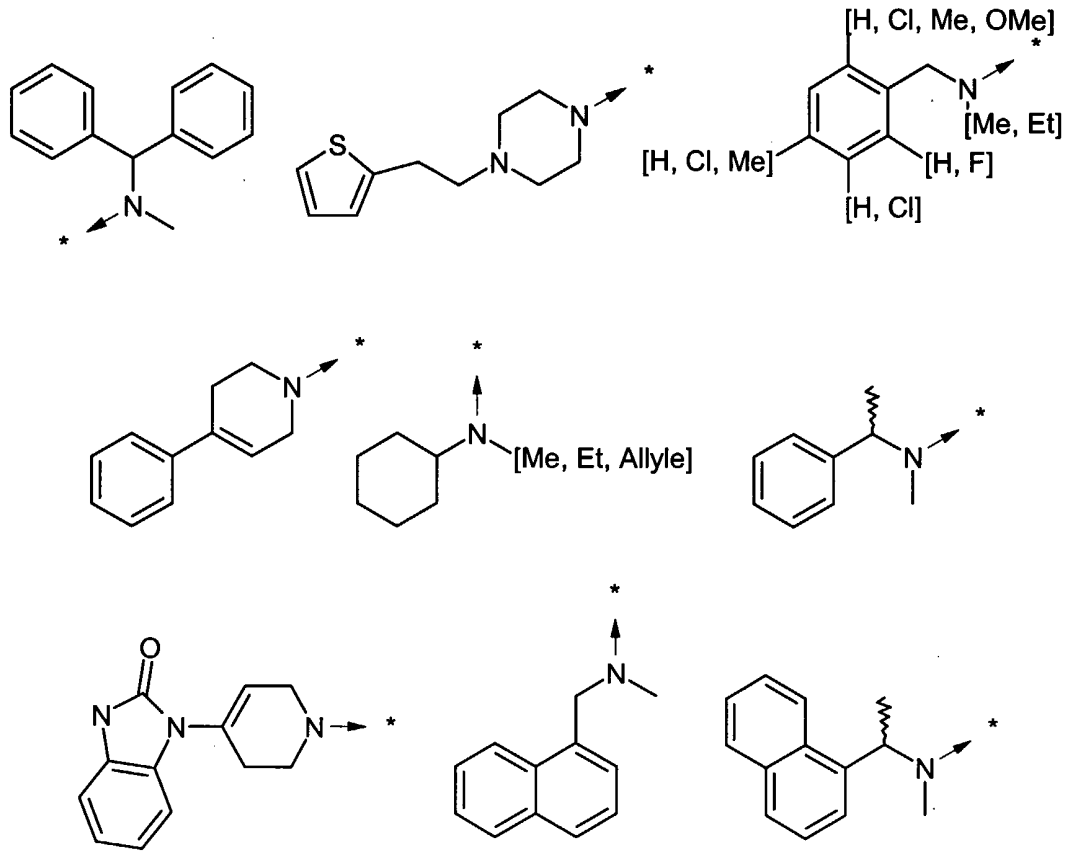


[Me, Et, nPr, nBu, iBu, iAm, CH_2Ph, CH_2CH_2Ph] [Me, Et, nPr, nBu, iBu, iAm, CH_2Ph, CH_2CH_2Ph]



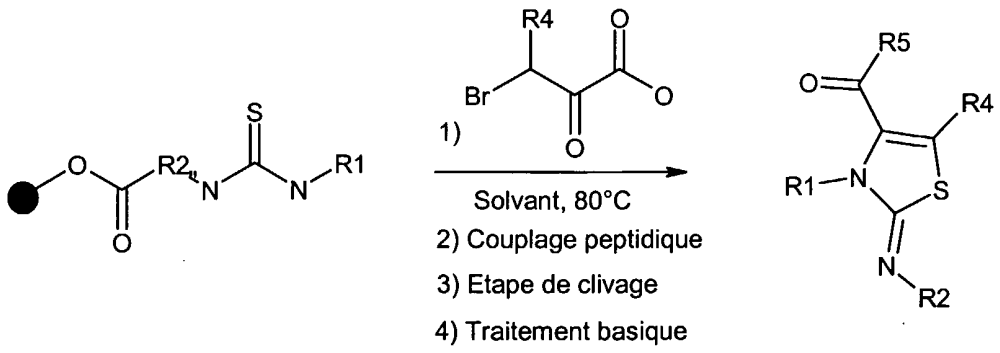

[Cl, OMe]
[Cl, OMe]
[Me, OMe, F]
[Me, OMe, F]
OMe
MeO
[F, Cl, Me, OMe, tBu]
[CONEt2, CONH2, Me]
CF3


F
N
N
*
[CF3, NO2]
Cl
O
S
[Me, Et, nPr]



METHODE D

Synthèse de 2-arylimino-1,3-thiazole-4(3*H*)-carboxamides



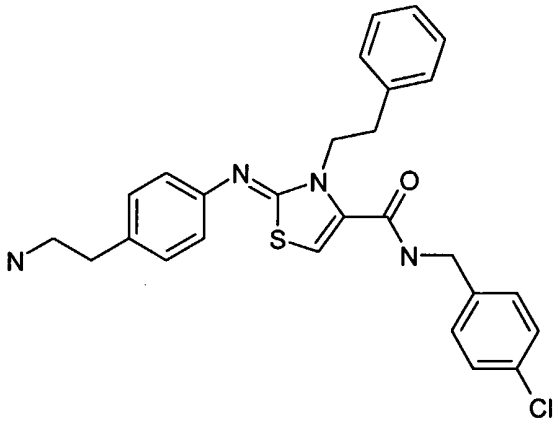
Procédure générale : une étape de cyclisation régiosélective à l'aide d'acide α-bromopyruvique (2-5 éq.) est effectuée à partir de la résine thiourée préparée dans la méthode B dans des solvants aprotiques comme le dioxane ou le DMF à 80 °C durant

2-3 heures. La résine est alors successivement lavée avec du DMF, du méthanol et du DCM puis séchée sous pression réduite. Le couplage peptidique (Knorr, R. ; Trzeciak, A. ; Bannwarth, W. ; Gillessen, D. *Tetrahedron Lett.* **1989**, *30*, 1927-1930) a lieu dans le DMF à température ambiante pendant 1-24 heures avec différents agents de couplage classiques (4-5 éq.) comme le dicyclohexylcarbodiimide (DCC), le diisopropylcarbodiimide (DIC), un mélange DIC/N-hydroxybenzotriazole (HOBt), l'hexafluorophosphate de benzotriazolyloxytris(diméthylamino)phosphonium (PyBOP), l'hexafluorophosphate de 2-(1*H*-benzotriazol-1-yl)-1,1,3,3-tétraméthyluronium (HBTU) ou le tétrafluoroborate de 2-(1*H*-benzotriazol-1-yl)-1,1,3,3-tétraméthyluronium (TBTU) et des composés aminés (4-5 éq.). La résine 2-arylimino-1,3-thiazole-4(3*H*)-carboxamide est clivée par traitement dans des conditions acides (DCM/acide trifluoroacétique à 50%) pendant 1-2 heures puis rinçage avec du DCM. Le solvant est évaporé et la base libre isolée après traitement dans des conditions basiques (solution saturée en hydrogénocarbonate de sodium) suivi d'une extraction avec du DCM ou élution avec du méthanol dans une cartouche d'alumine basique (500 mg, Interchim).

Exemple 4

(2Z)-2-{[4-(2-aminoéthyl)phényl]imino}-N-(4-chlorobenzyl)-3-(2-phényléthyl)-2,3-dihydro-1,3-thiazole-4-carboxamide

($C_{27}H_{27}ClN_4OS$, MM = 491,05) :



A 200 mg (190 µmol, charge de 0,946 mmol/g) de résine aminée (voir préparation 20) est ajouté du phényléthylisothiocyanate (310 mg ; 1,9 mmol ; 10 éq.) dans 3 ml de diméthylformamide. L'agitation durant une nuit à température ambiante donne un test ninhydrine de Kaiser négatif. La résine est alors successivement lavée avec du DMF (5 x 3 ml) et du DCM (5 x 3 ml) puis séchée sous vide pendant une heure avant d'ajouter l'acide bromopyruvique (63,4 mg ; 380 µmol ; 2 éq.) préalablement dilué dans 3 ml de diméthylformamide. Le mélange est agitée pendant 2,5 heures à 80°C. Filtrer et laver la résine au DMF (5 x 3 ml), méthanol (3 x 3 ml) puis DCM (5 x 3 ml). La résine acide carboxylique est préactivée pendant 1 heure avec 244 mg (0,76 mmol ; 4 éq.) de TBTU dilué dans 2 ml de DMF anhydre. 110 mg (0,76 mmol ; 4 éq.) de 4-chlorobenzylamine dissous dans 1 ml de DMF anhydre sont alors ajoutés et la résine est filtrée après une nuit d'agitation à température ambiante. Un lavage séquentiel avec du DMF (5 x 3 ml), du méthanol (3 x 3 ml) et du DCM (3 x 3 ml) donne une résine qui est traitée pendant une heure et demie dans des conditions acides (DCM/acide trifluoroacétique à 50 %). La résine est rincée avec du DCM (5 x 1 ml) et le filtrat évaporé sous pression réduite. Le résidu, repris dans du DCM, est neutralisé avec une solution saturée d'hydrogénocarbonate de sodium pour donner après évaporation un solide (38,2 mg ; rendement de 41% ; pureté UV de 90% à 210 nm).

RMN ^1H (DMSO D6, 400 MHz, δ) : 9,1 (m, 1H) ; 7,39 (d, 2H, J = 8,4 Hz) ; 7,33 (d, 2H, J = 8,4 Hz) ; 7,25 (q, 2H, J = 6,8 Hz) ; 7,19 (q, 1H, J = 7,2 Hz) ; 7,11 (m, 4H) ; 6,8 (d, 2H, J = 8 Hz) ; 6,75 (s, 1H, *H* azole) ; 4,34 (d, 2H, J = 6 Hz) ; 4,27 (t, 2H, J = 6,8 Hz) ; 3,14 (m, 1H) ; 2,89 (t, 2H, J = 6,8 Hz) ; 2,73 (t, 1H, J = 7,2 Hz) ; 2,62 (m, 2H).

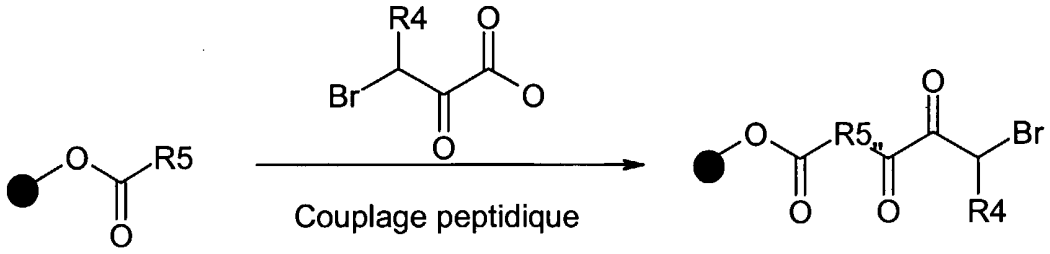
SM/CL : m/z = 491,24 $(M+H)^+$.

Une série de 2-arylimino-1,3-thiazole-4(3*H*)-carboxamides a été synthétisée selon la méthode D à l'aide de notre système robotique (ACT MOS 496) :

- Groupes R1 et R2 déjà décrits dans la méthode B
- R3 = -CO-R5
- R4 = H
- Groupes R5 déjà décrits dans la méthode C.

METHODE E

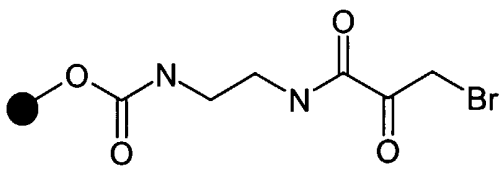
Préparation de résine diamine monoprotégée fonctionnalisée avec l'acide α-bromopyruvique



Procédure générale : la résine diamine primaire ou secondaire symétrique monoprotégée (dont la préparation est déjà décrite dans la méthode A) est fonctionnalisée par couplage peptidique avec l'acide α-bromopyruvique (10 éq.), le DIC (10 éq.) et l'HOBt (10 éq.) dans un solvant tel que le DMF à température ambiante. La résine est successivement lavée au DMF puis au DCM après 2 à 24 heures d'agitation avant d'être séchée sous vide. Le test ninhydrine de Kaiser négatif indique une fonctionnalisation complète.

Préparation 22

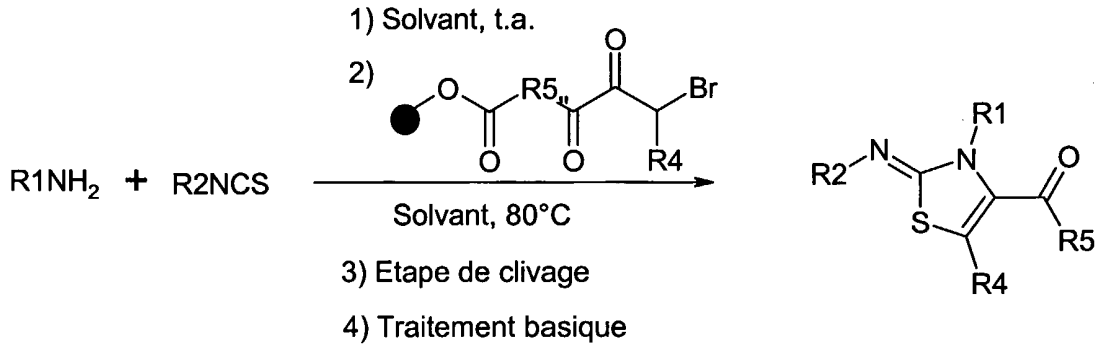
Résine de Wang N-carbamate de 2-[(3-bromo-2-oxopropanoyl)amino]éthyle



L'HOBt (0,93 g, 6,88 mmol) et l'acide α-bromopyruvique (1,18 g, 6,88 mmol) sont dissous dans 28 ml de DMF (0,5 M). Le DIC (1,07 ml ; 6,88 mmol) est ensuite additionné à la seringue pour activer l'acide. Le mélange est agité mélange environ 15

minutes à température ambiante avant de l'ajouter à la résine de Wang N-carbamate d'éthylène diamine (0,8 g ; 0,688 mmol ; taux de charge de 0,86 mmol/g). Après 3 heures d'agitation à température ambiante, le test ninhydrine de Kaiser étant négatif, la résine est filtrée et lavée successivement au DMF (5 x 20 ml) puis au DCM (5 x 20 ml) avant d'être séchée sous vide. Une résine ocre (0,812 g) est obtenue avec un taux de charge de 0,525 mmol/g calculé à partir de l'analyse élémentaire du brome.

Synthèse de 2-arylimino-1,3-thiazole-4(3*H*)-carboxamides

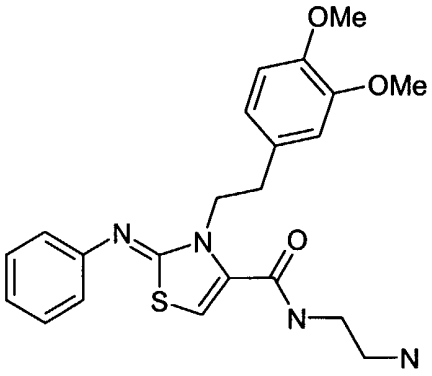


Procédure générale : la formation de la thiourée s'effectue dans un solvant tel que le DMF ou le dioxane en mélangeant une quantité équimolaire d'amine primaire et d'isothiocyanate aromatique ou hétéroaromatique. Après 2 à 24 heures d'agitation à température ambiante, la thiourée (2 à 5 éq.) est additionnée à la résine fonctionnalisée puis chauffée à 80°C pendant 2 à 4 heures. La résine 2-arylimino-1,3-thiazole-4(3*H*)-carboxamide est clivée par traitement dans des conditions acides (DCM/acide trifluoroacétique à 50%) pendant 1-2 heures puis rinçage avec du DCM. Le solvant est évaporé et la base libre isolée après traitement dans des conditions basiques (solution saturée en hydrogénocarbonate de sodium), extraction avec du DCM ou élution avec du méthanol dans une cartouche d'alumine basique (500 mg, Interchim).

Exemple 5

(2Z)-N-(2-aminoéthyl)-3-[2-(3,4-diméthoxyphényl)éthyl]-2-(phénylimino)-2,3-dihydro-1,3-thiazole-4-carboxamide

($C_{22}H_{26}N_4O_3S$, MM = 426,54) :



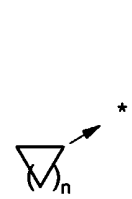
18 µl (105 µmol ; 2 éq.) de β-(3,4-diméthoxyphényl)éthylamine et 12,6 µl (105 µmol ; 2 éq .) de phénylisothiocyanate sont agités dans 1 ml de DMF pendant 18 heures. La thiourée est ajoutée à 100 mg (52,5 µmol ; taux de charge de 0,525 mmol/g) de résine (préparation 22) et le mélange chauffé à 80°C pendant 3 heures. La résine est alors filtrée puis lavée successivement avec du DMF (5 x 1 ml), du méthanol (5 x 1 ml) puis du DCM (5 x 1 ml). Sécher la résine sous vide avant d'ajouter 1 ml de mélange DCM/TFA 50%. On agite 1,5 heures à température ambiante, filtre et rince la résine au DCM. Le résidu récupéré après évaporation est ensuite élué avec du méthanol dans une cartouche d'alumine basique pour isoler 22,2 mg (rendement quantitatif ; pureté UV de 93,4% à 230 nm) de solide marron correspondant à l'amine libre.

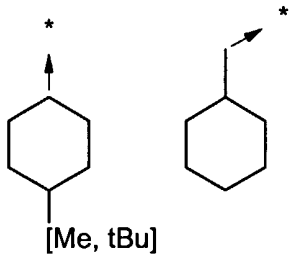
RMN ^{1}H (DMSO D6, 100 MHz, δ) : 8,42 (m, 1H, N*H*) ; 7,32 (t, 2H, J = 7,1 Hz) ; 7,08-6,63 (m, 6H) ; 5,76 (s, 1H, *H* azole) ; 4,31 (t, 2H, J = 6,6 Hz) ; 3,72 (s, 6H, OCH_3) ; 3,32 (s large, 2H) ; 3,17 (m, 2H) ; 2,89 (m, 2H) ; 2,62 (m, 2H).

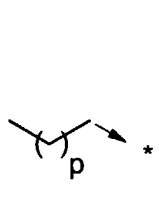
SM/CL : m/z = 427,17 $(M+H)^+$.

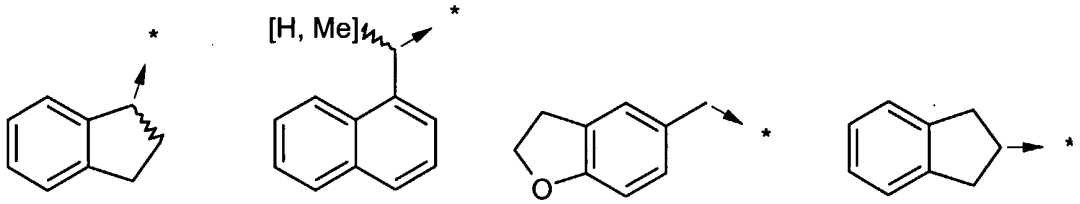
Une série de 2-arylimino-1,3-thiazole-4(3*H*)-carboxamides a été synthétisée selon la méthode E à l'aide de notre système robotique (ACT MOS 496) :

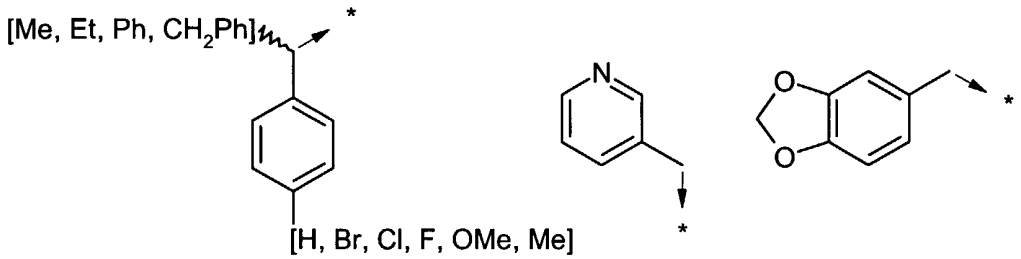
- Groupes R1 :

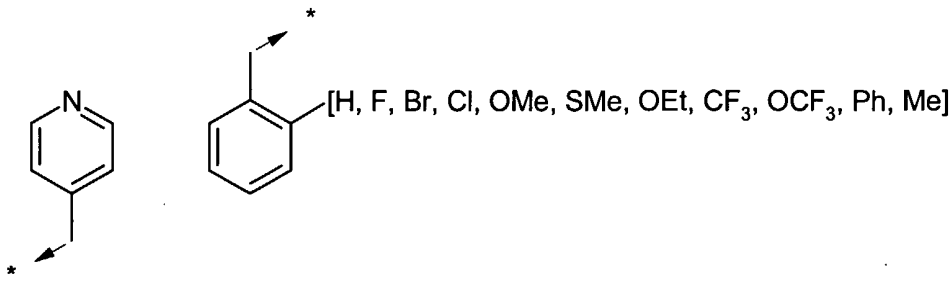


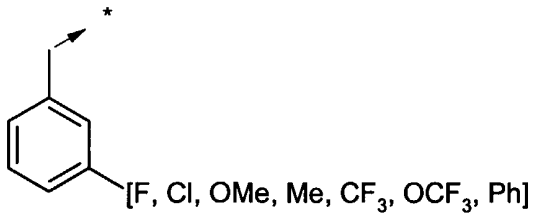


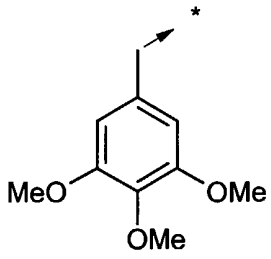


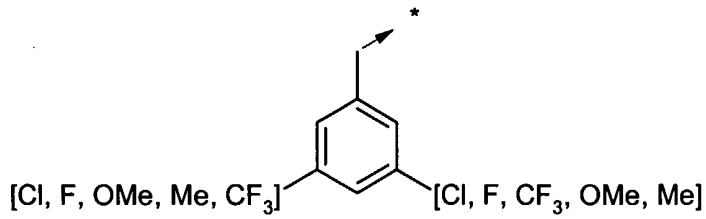


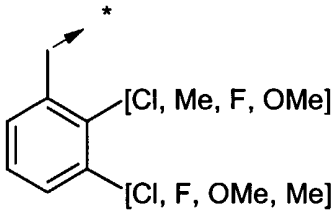


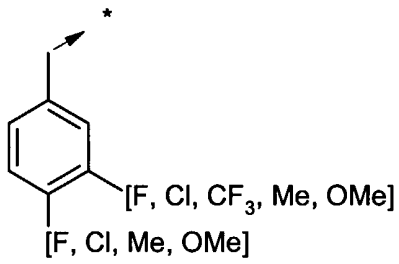


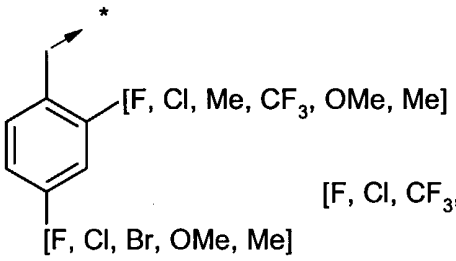


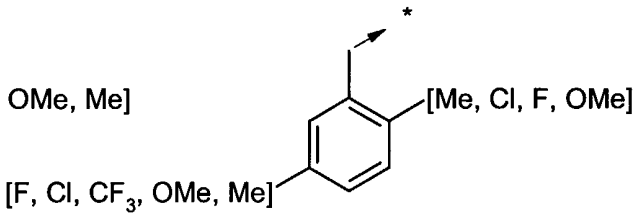


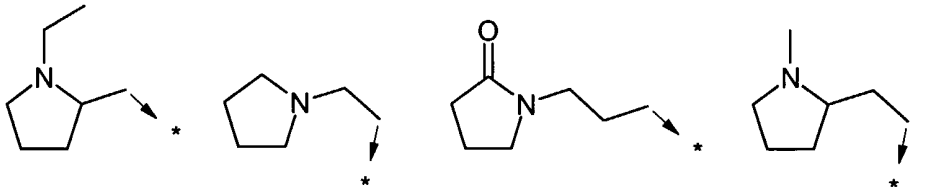

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[Cl, F, CF3, OMe, Me]

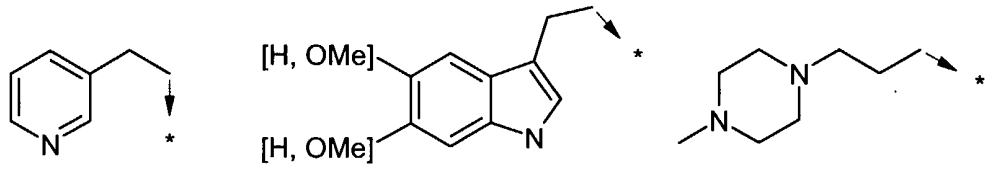

[Cl, Me, F, OMe]
[Cl, F, OMe, Me]

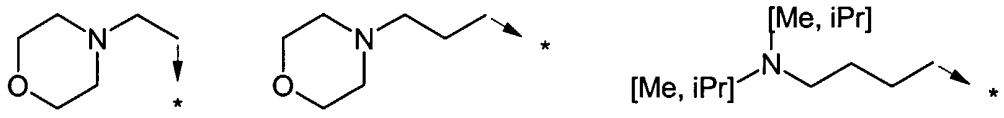

[F, Cl, CF3, Me, OMe]
[F, Cl, Me, OMe]

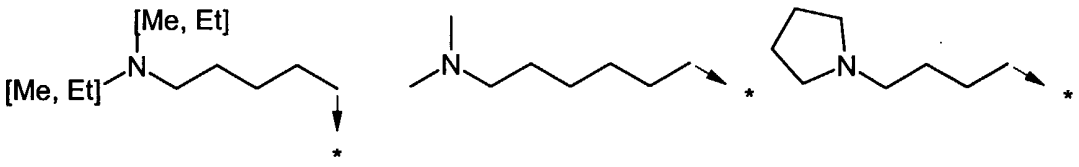

[F, Cl, Me, CF3, OMe, Me]
[F, Cl, Br, OMe, Me]

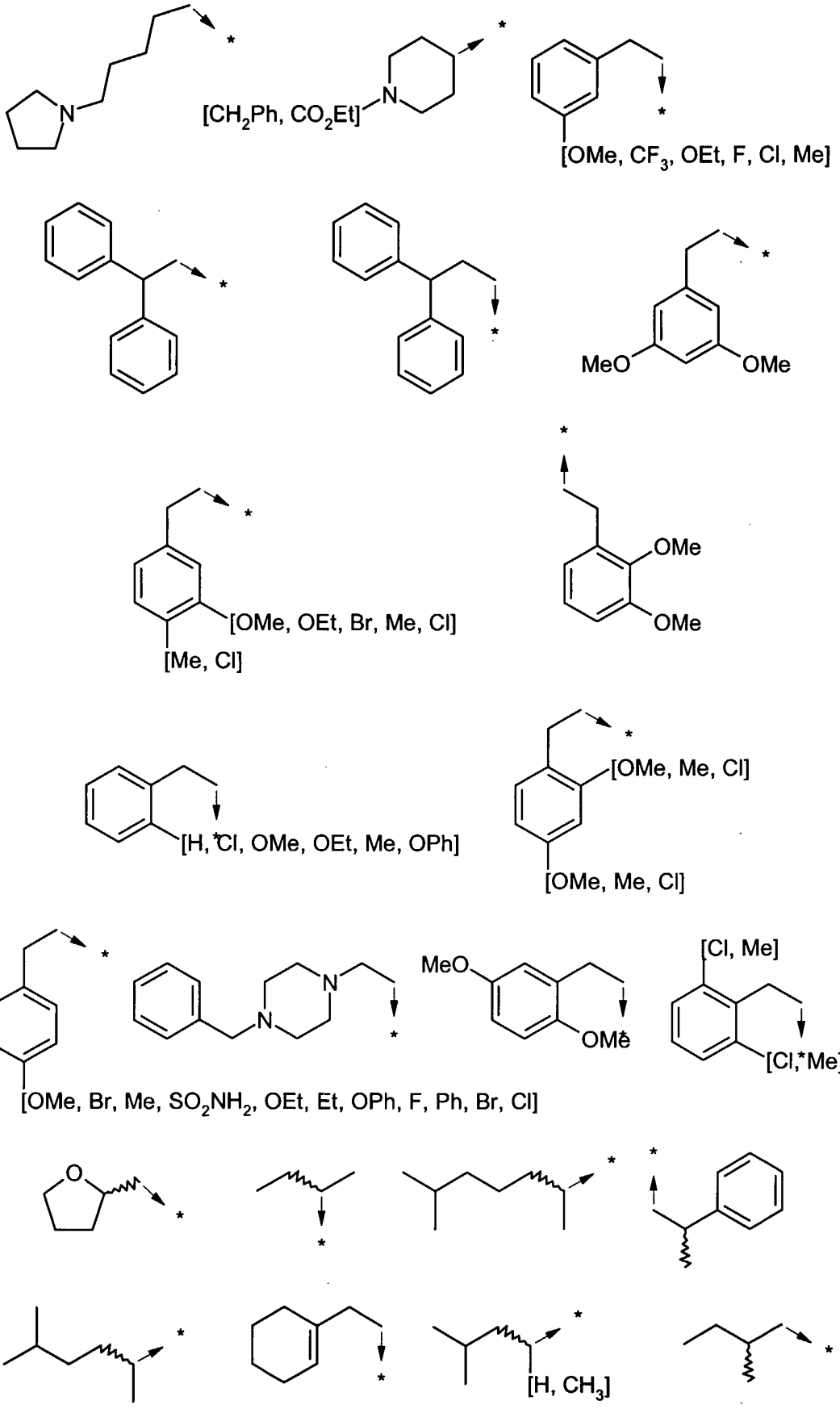

[Me, Cl, F, OMe]
[F, Cl, CF3, OMe, Me]

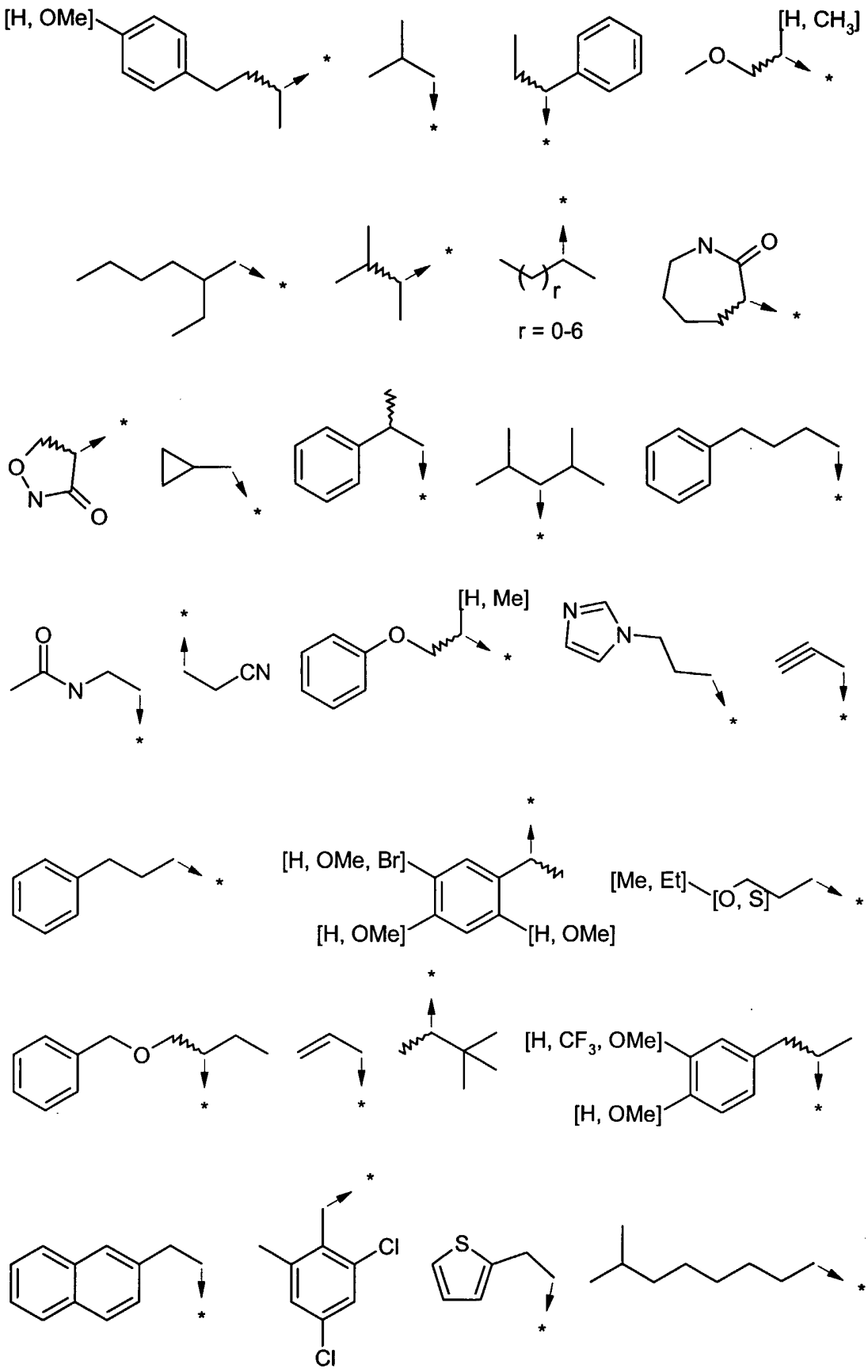

N
O
N
N

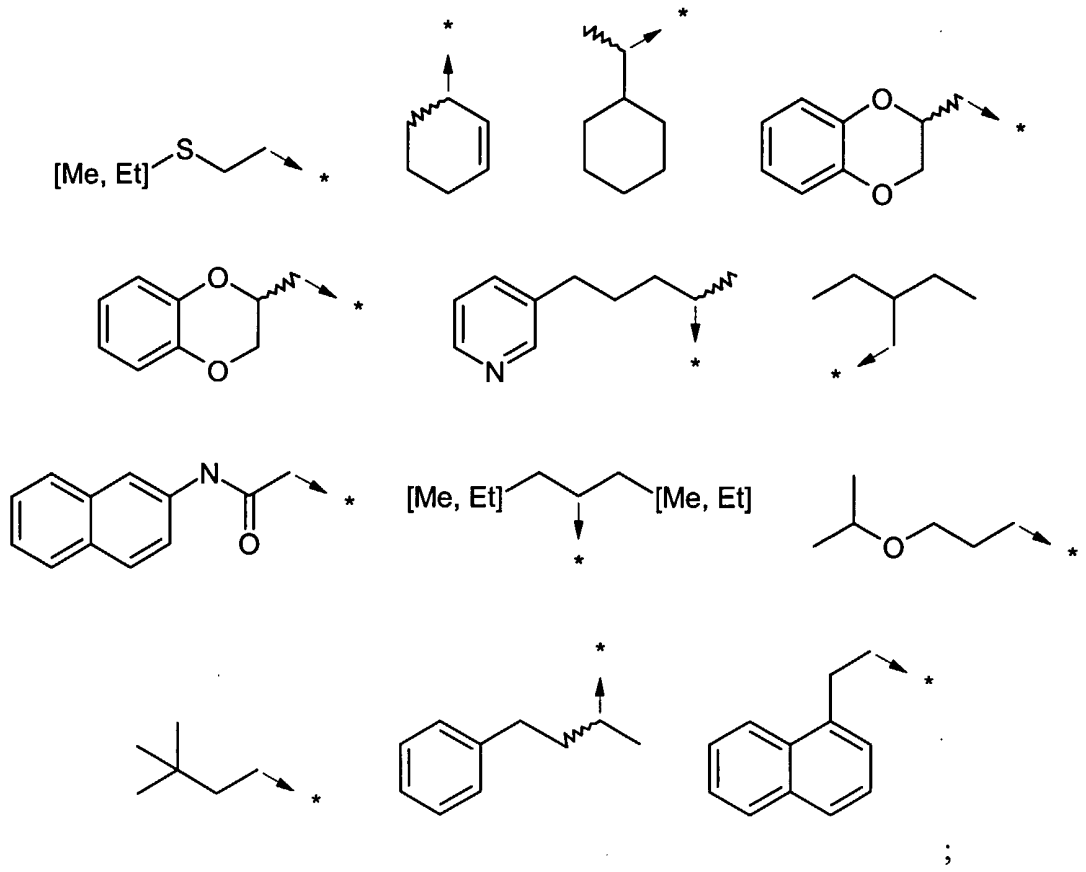

[H, OMe]
[H, OMe]
N
N
N
N


N
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O
[Me, iPr]
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[Me, iPr]


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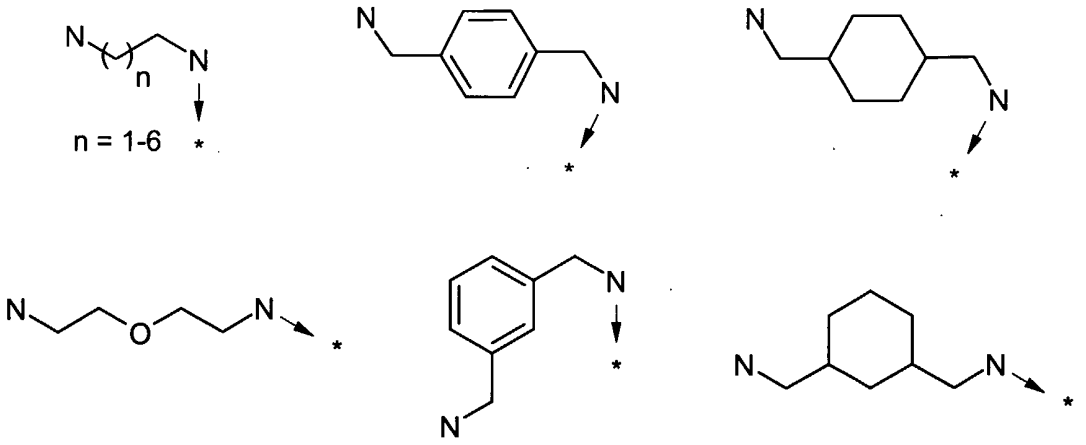

[CH2Ph, CO2Et]
[OMe, CF3, OEt, F, Cl, Me]
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OMe
[OMe, OEt, Br, Me, Cl]
[Me, Cl]
OMe
OMe
[H, Cl, OMe, OEt, Me, OPh]
[OMe, Me, Cl]
[OMe, Me, Cl]
MeO
OMe
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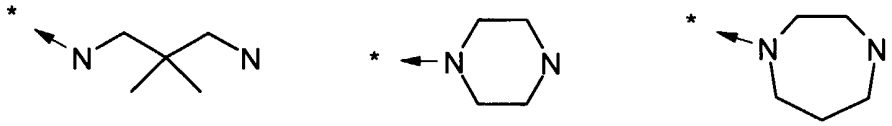

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[O, S]
[H, CF3, OMe]
[H, OMe]
Cl
Cl
S



;

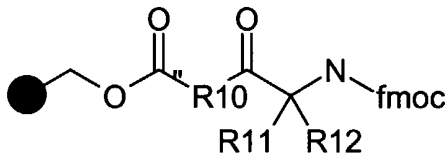
- Groupes R2 déjà décrits dans la méthode A
- R3 = -CO-R5
- R4 = H
- Groupes R5 :





METHODE F

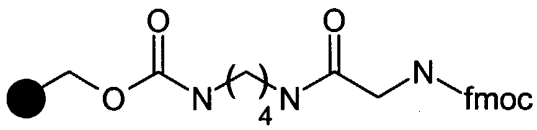
Préparation des résines diamines monoprotégées fonctionnalisées avec des acides aminés N-protégés (Fmoc)



Procédure générale : le couplage peptidique des résines diamines monoprotégées avec des acides aminés N-Fmoc (4 à 10 éq.) commercialement disponibles (Bunin, B.A. *The Combinatorial Index*, Academic Press, **1998**, p. 77-82) s'effectue dans le DMF à température ambiante pendant 1 à 24 heures avec différents agents de couplage classiques (4 à 10 éq.) tels que le dicyclohexylcarbodiimide (DCC), le diisopropylcarbodiimide (DIC), un mélange DIC/N-hydroxybenzotriazole (HOBt), l'hexafluorophosphate de benzotriazolyloxytris(diméthylamino)phosphonium (PyBOP), l'hexafluorophosphate de 2-(1*H*-benzotriazol-1-yl)-1,1,3,3-tétraméthyluronium (HBTU) ou le tétrafluoroborate de 2-(1*H*-benzotriazol-1-yl)-1,1,3,3-tétraméthyluronium (TBTU). La résine est ensuite successivement lavée avec du DMF et du DCM. La séquence de couplage peut être répétée (1 à 2 fois) jusqu'à ce que le test ninhydrine de Kaiser soit négatif.

Préparation 23

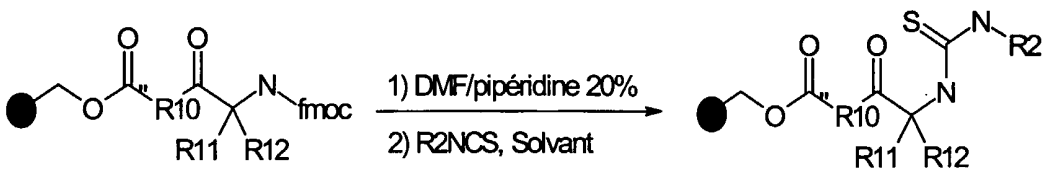
Résine de Wang N-carbamate de 4-[({[(9H-fluoren-9-ylméthoxy)carbonyl]amino}acétyl)amino]butyle



L'acide Fmoc-Gly-OH (2,36 g, 7,94 mmol) est activé avec de l'HOBt (1,07 g, 7,94 mmol) et du DIC (1,25 ml, 7,94 mmol) dans 22 ml de DMF pendant 5 minutes avant

d'additionner le mélange à la résine de Wang N-carbamate de butylamine (1 g, taux de charge de 0,794 mmol/g) prégonflée dans 10 ml de DMF. Après 18 heures d'agitation à température ambiante, la résine est lavée successivement au DMF (5 x 20 ml) puis au DCM (5 x 20 ml) avant d'être séchée sous vide. 1,27 g de résine jaune pale est ainsi obtenu présentant un test ninhydrine de Kaiser négatif.

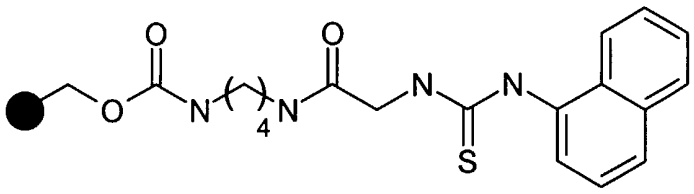
Préparation des résines thiourées



Procédure générale : une résine décrite ci-dessus est déprotégée avec un mélange DMF/pipéridine à 20%. Après une heure d'agitation à température ambiante, la résine est filtrée et lavée successivement au DMF puis au DCM. La séquence de déprotection/lavage est répétée une seconde fois et la résine est séchée sous vide. Cette dernière est prégonflée dans un solvant tel que le DMF ou le DCM puis un isothiocyanate aromatique ou hétéroaromatique (5 à 10 éq.) est ajouté. Le mélange est agité 2 à 24 heures à température ambiante avant de filtrer et laver la résine successivement au DMF puis au DCM. La résine est alors séchée sous vide et un test ninhydrine de Kaiser négatif confirme que la réaction de substitution est complète.

Préparation 24

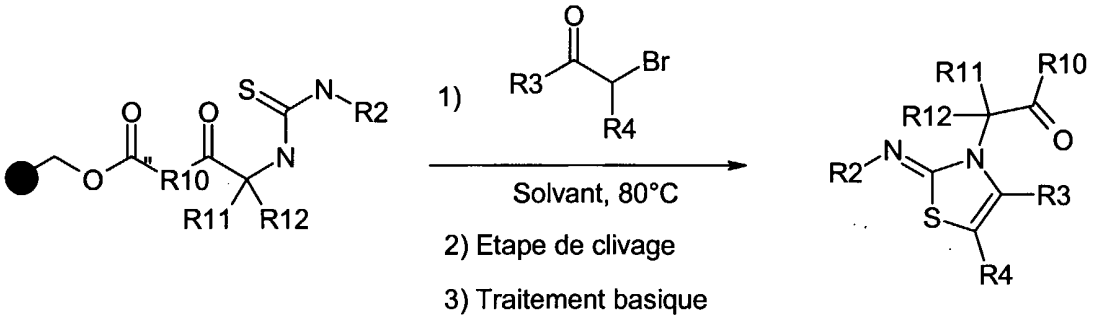
Résine de Wang N-carbamate de 4-[({[(1-naphthylamino)carbothioyl]amino}acétyl)amino]butyle



1,27 g de résine ci-dessus (voir préparation 23) sont déprotégés avec 14 ml de DMF/pipéridine à 20%. Le mélange est agité une heure à température ambiante. La résine est alors filtrée puis lavée au DMF (5 x 30 ml) puis au DCM (5 x 30 ml). La séquence de déprotection/lavage est répétée une fois avant de sécher sous vide la résine. 0,781 g de résine jaune pale a ainsi été obtenue avec un taux de charge de 0,758 mmol/g

calculé d'après l'analyse élémentaire du soufre. A 0,3 g (0,22 mmol) de cette résine thiourée sont additionnés 416 mg (2,2 mmol, 10 éq.) de 1-naphthylisothiocyanate dilués dans 6 ml de DMF. Le mélange est agité 18 heures à température ambiante. La résine est filtrée puis lavée successivement au DMF (5 x 20 ml) puis au DCM (5 x 20 ml). 310 mg de résine jaune pale sont isolés après séchage sous vide avec un taux de charge de 0,66 mmol/g calculé d'après l'analyse élémentaire de l'azote.

Synthèse de 2-arylimino-2,3-dihydrothiazoles

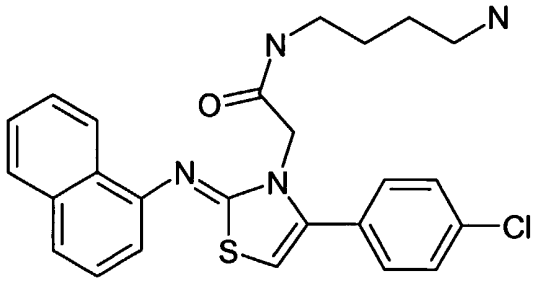


Procédure générale : l'étape de cyclisation régiosélective s'effectue dans des solvants aprotiques comme le dioxane, le DMF ou la N-méthylpyrrolidinone à 80 °C pendant 2 à 3 heures entre la résine thiourée et l'α-bromocétone (2 à 5 éq.). La résine est alors lavée successivement avec du DMF, du méthanol et du DCM puis séchée sous pression réduite. La résine 2-arylimino-2,3-dihydrothiazole est clivée dans des conditions acides (DCM/acide trifluoroacétique à 50%) pendant 1 à 2 heures puis rincée avec du DCM. Le solvant est évaporé et la base libre isolée après traitement dans des conditions basiques (solution saturée en hydrogénocarbonate de sodium) suivi d'une extraction avec du DCM ou élution avec du méthanol dans une cartouche d'alumine basique (500 mg, Interchim).

Exemple 6

N-(4-aminobutyl)-2-((2Z)-4-(4-chlorophényl)-2-(1-naphthylimino)-1,3-thiazol-3(2H)-yl)acétamide

($C_{25}H_{25}ClN_4OS$, MM = 465,02) :

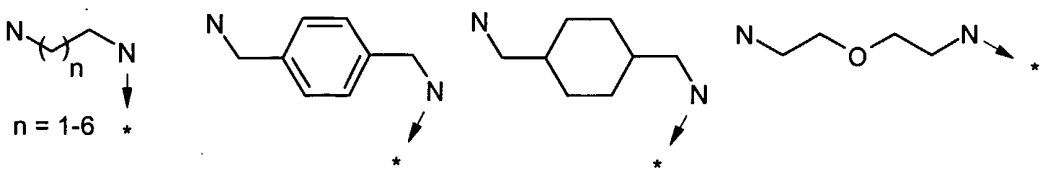


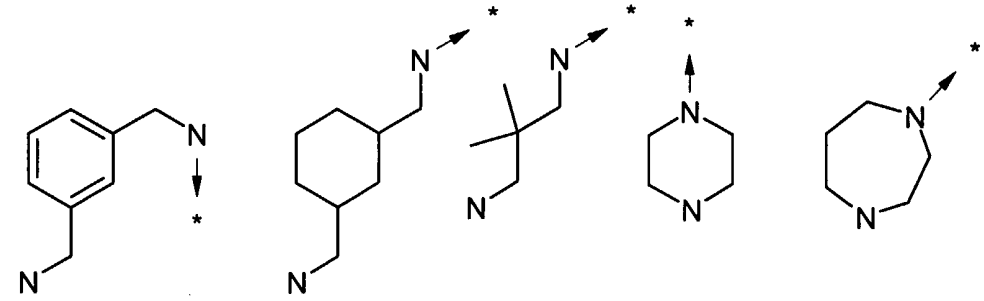
80 mg (52,8 µmol, taux de charge de 0,66 mmol/g) de résine thiourée (préparation 24) et 25,1 mg (105,6 mmol, 2 éq.) de 2-bromo-4'-chloroacétophénone sont dilués dans 1 ml de DMF. Le mélange est chauffé à 80°C pendant 2 heures. La résine est filtrée puis lavée avec du DMF (5 x 1 ml), du méthanol (5 x 1 ml) puis du DCM (5 x 1 ml) avant d'être séchée sous vide. On ajoute 1 ml de mélange DCM/TFA 50% et on agite pendant 1,5 heures. La résine est filtrée et rincée au DCM. Le filtrat est évaporé puis redilué dans du méthanol pour élution sur alumine basique. 20,6 mg (rendement de 84% ; pureté UV de 94,2 % à 220 nm) de solide jaune sont ainsi isolés après évaporation correspondant à la base libre.

RMN ^{1}H (DMSO D6, 100 MHz, δ) : 8,36 (t, 1H, J = 4,7 Hz, N*H*) ; 8,12 (dd, 1H, J = 2,1 et 7,3 Hz) ; 7,87 (dd, 1H, J = 2,7 et 6,3 Hz) ; 7,63-7,34 (m, 8H) ; 7,13 (dd, 1H, J = 1,6 et 6,7 Hz) ; 6,33 (s, 1H, *H* azole) ; 4,44 (s large, 2H) ; 3,14 (m, 2H) ; 2,7 (m, 2H) ; 1,5 (m, 4H). SM/CL : m/z = 465,21 $(M+H)^+$.

Une série de 2-arylimino-2,3-dihydrothiazoles a été synthétisée selon la méthode F à l'aide de notre système robotique (ACT MOS 496) :

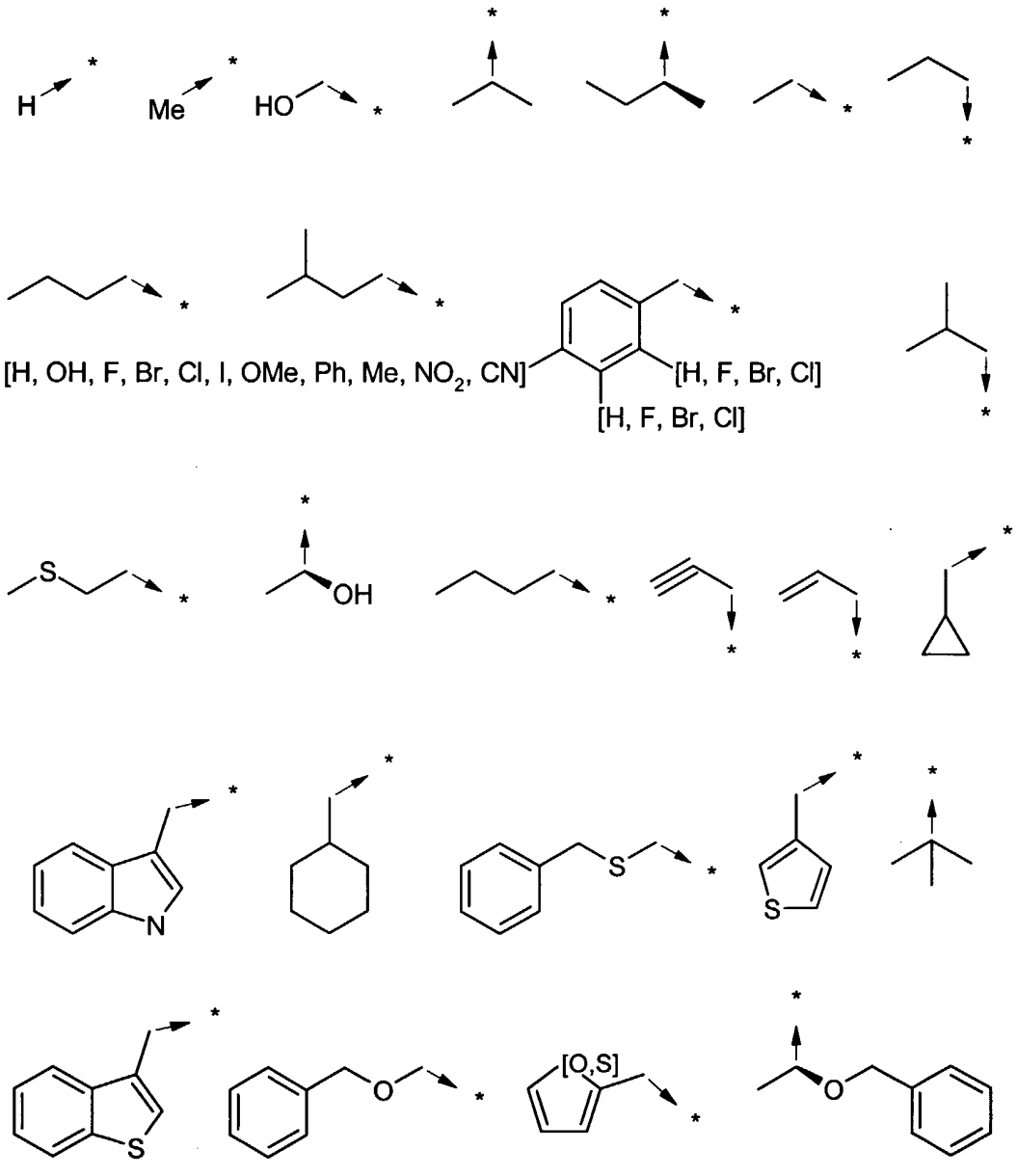
- R1 = -C(R11R12)-CO-R10
- Groupes R2, R3 et R4 déjà décrits dans la méthode A
- Groupes R10 :

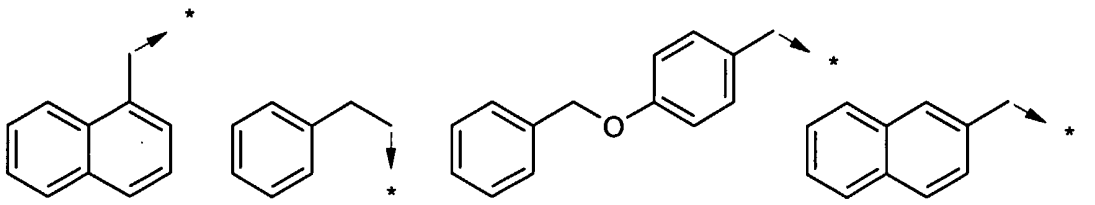




;

- R11 = H
- Groupes R12 :





;

EXEMPLES

Ci-après sont repris dans des tableaux des exemples obtenus selon les méthodes A, B, C, D, E et F décrites ci-dessus. Ces exemples sont présentés pour illustrer les procédures ci-dessus et ne doivent en aucun cas être considérés comme une limite à la portée de l'invention.

Les composés obtenus ont été caractérisés grâce à leur temps de rétention (tr) et à la spectrométrie de masse $(M+H)^+$.

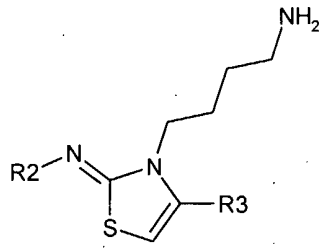
Les chromatogrammes sont obtenus à partir d'un appareil de chromatographie liquide haute performance (Hewlett-Packard 1100) équipé d'un détecteur UV à balayage. Les conditions suivantes ont été employées pour les mesures des temps de rétention par chromatographie liquide haute performance, sachant que la longueur d'onde d'extraction de chacun des chromatogrammes est de 220 nm :

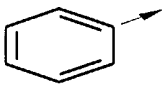
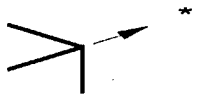
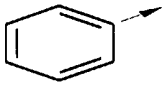
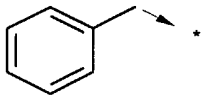
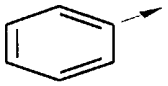
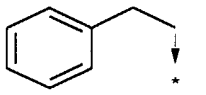
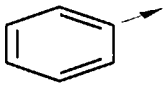
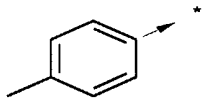
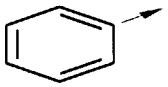
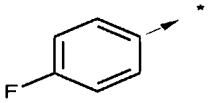
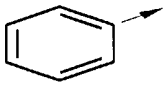
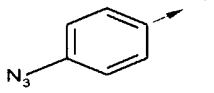
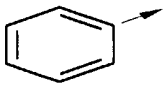
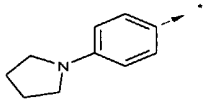
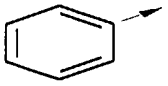
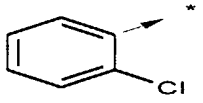
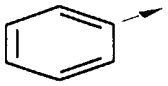
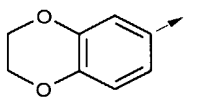
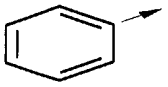
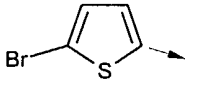
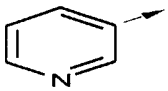
t (min.)	A (%)	B (%)
0	90	10
6	15	85
8	15	85

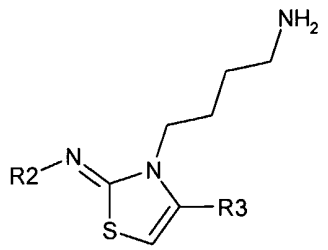
Eluant A : eau + 0,02% d'acide trifluoroacétique ; éluant B : acétonitrile.

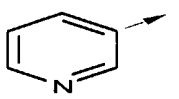
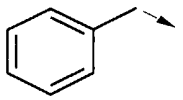
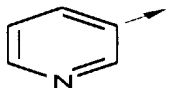
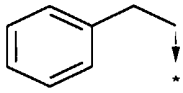
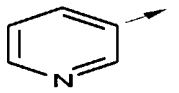
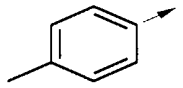
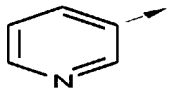
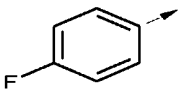
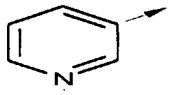
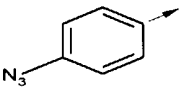
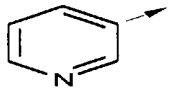
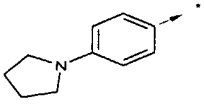
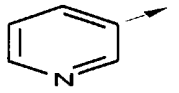
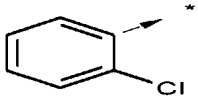
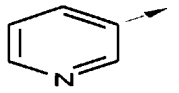
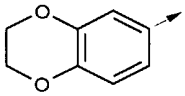
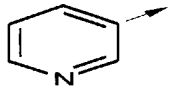
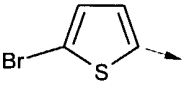
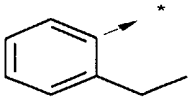
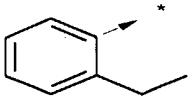
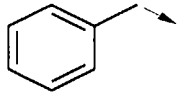
Débit : 1 ml/min ; volume injecté : 5 µl ; température : 40 °C. Colonne : Uptisphère 3µm ODS, 50 x 4,6 mm i.d. (Interchim)

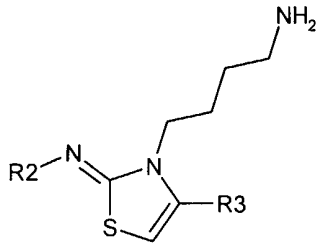
Les spectres de masse sont obtenus à partir d'un spectromètre de masse simple quadripôle équipé d'une source électrospray (Micromass, Platforme II).

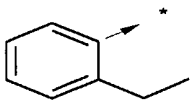
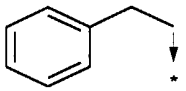
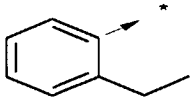
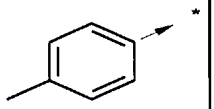
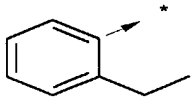
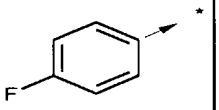
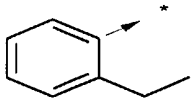
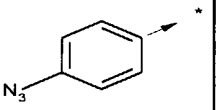
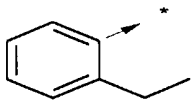
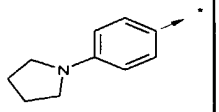
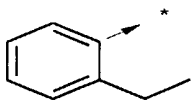
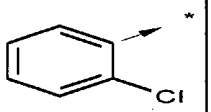
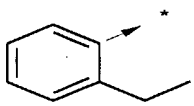
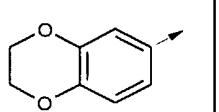
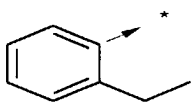
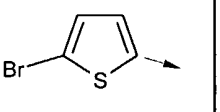
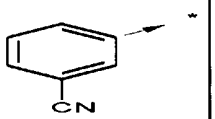
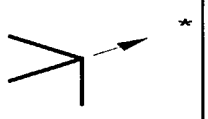
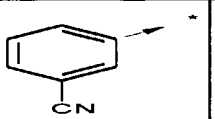
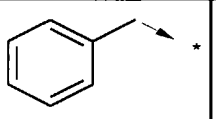
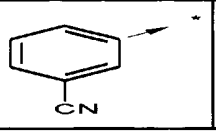
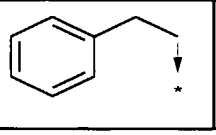


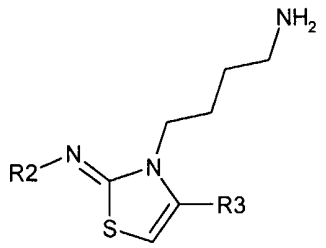
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7			91,2	3,09	304,2
8			93,1	3,38	338,2
9			94	3,56	352,2
10			93,3	3,42	338,2
11			96,6	3,25	342,2
12			96,4	3,46	365,2
13			91,9	3,86	393,2
14			96,4	3,44	358,2
15			95,6	3,34	382,2
16			94,5	3,7	408
17			54,43	2,9	305,2

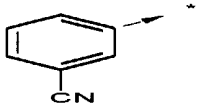
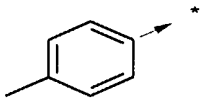
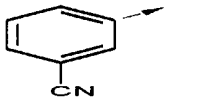
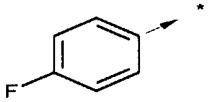
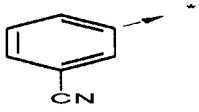
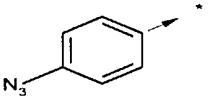
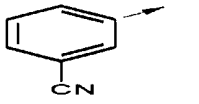
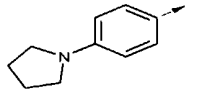
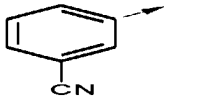
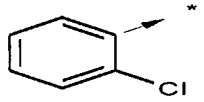
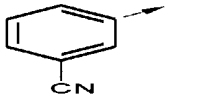
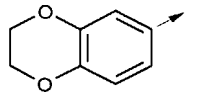
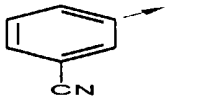
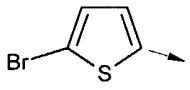
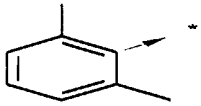
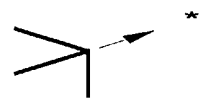
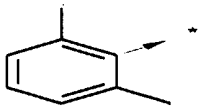
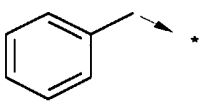
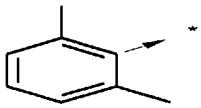
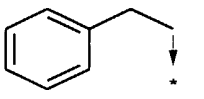
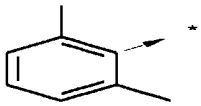
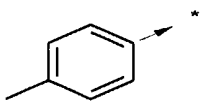


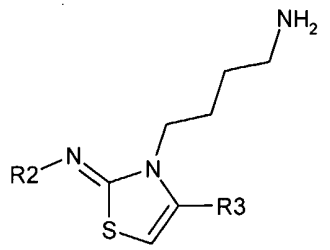
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
18			50,4	3,14	339,2
19			48,9	3,38	535,2
20			39,3	3,26	339,2
21			49,5	3,06	343,2
22			42,3	3,29	366,2
23			43,4	3,7	394,3
24			56,7	3,16	359,2
25			45,3	3,09	383,2
26			45,7	3,3	409
27			96,8	3,41	332,3
28			92,8	3,7	366,3

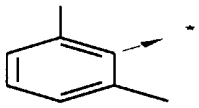
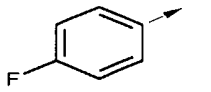
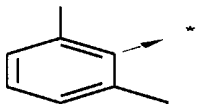
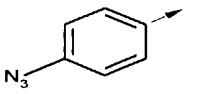
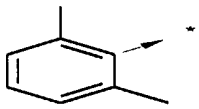
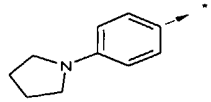
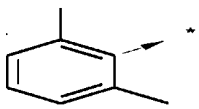
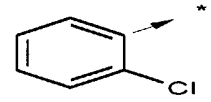
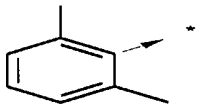
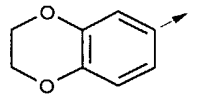
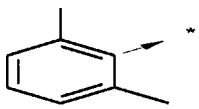
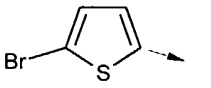
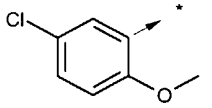
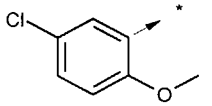
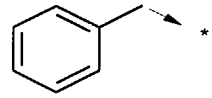
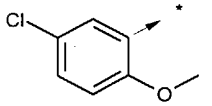
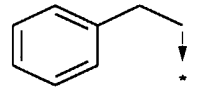
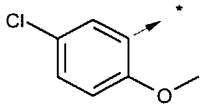
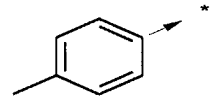
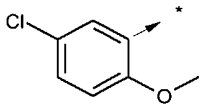
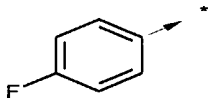


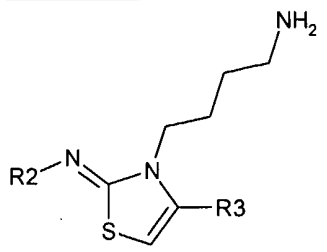
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
29			90,6	3,84	380,3
30			93,7	3,76	366,3
31			94,4	3,63	370,2
32			89,1	3,82	393,2
33			90,1	4,12	410,2
34			96,7	3,83	386,2
35			95,8	3,67	410,2
36			93,4	4,17	436,1
37			88,4	3,64	329,25
38			91,8	4,03	363,2
39			88,6	4,15	377,2

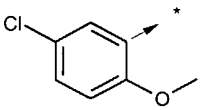
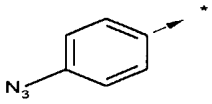
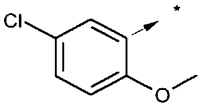
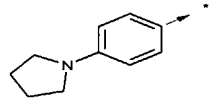
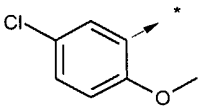
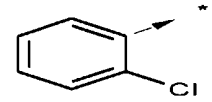
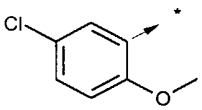
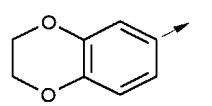
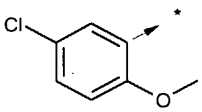
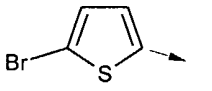
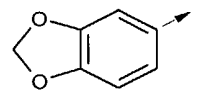
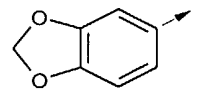
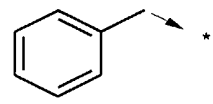
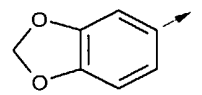
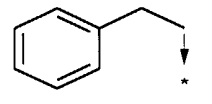
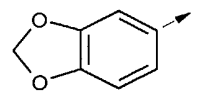
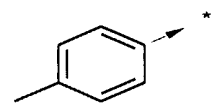
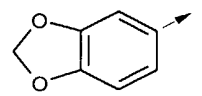
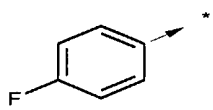
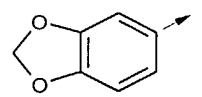
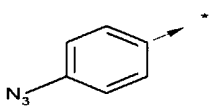


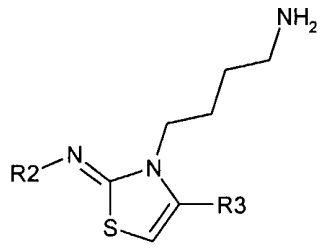
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
40			94,1	4,22	363,2
41			95,2	4,1	376,2
42			92,8	4,35	390,2
43			94,1	4,54	418,2
44			95	4,34	383,1
45			95,1	4,06	407,2
46			93	4,7	433,1
47			96,4	3,32	332,3
48			92,9	3,62	366,3
49			95,6	3,76	380,3
50			95,6	3,64	366,33

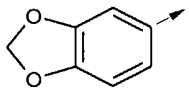
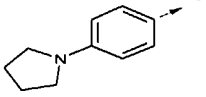
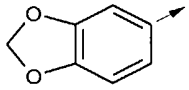
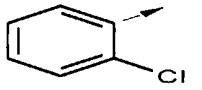
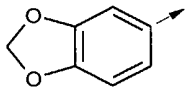
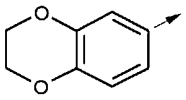
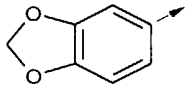
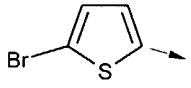
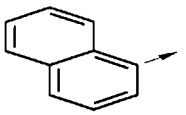
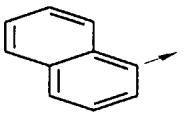
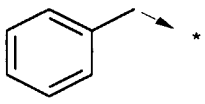
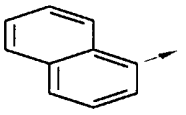
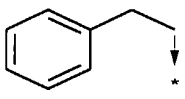
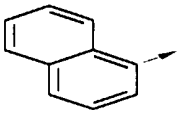
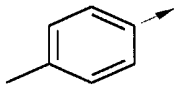
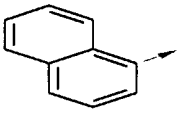
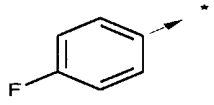
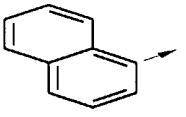
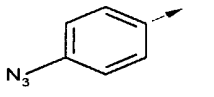
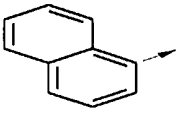
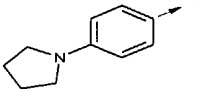


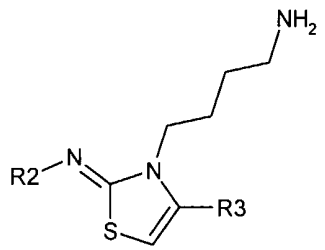
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
51			96	3,51	370,2
52			87	3,69	390,2
53			80,9	4,04	421,3
54			97,1	3,7	436,1
55			94,6	3,59	410,2
56			95,6	3,92	436,1
57			82,1	3,66	368,2
58			90,7	3,94	402,2
59			85,5	4,06	416,2
60			94,4	4,09	402,2
61			95,1	3,99	406,2

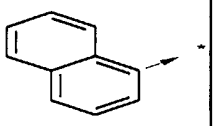
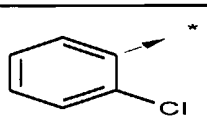
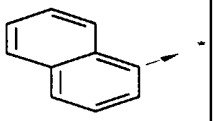
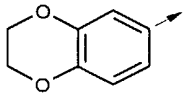
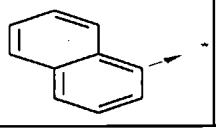
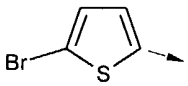


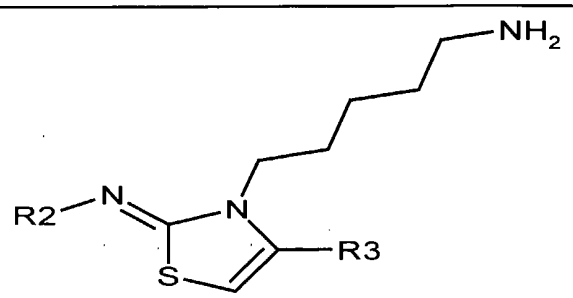
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
62			93,6	4,21	429,2
63			93,6	4,39	457,2
64			96	4,22	422,1
65			91,6	3,96	446,2
66			94,5	4,65	472
67			97	3,07	348,2
68			93,6	3,36	382,2
69			93,4	3,54	396,2
70			94,7	3,41	382,1
71			96,3	3,24	386,2
72			94,5	3,44	409,1

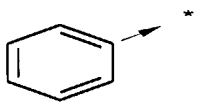
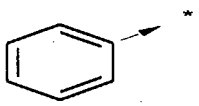
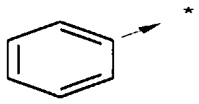
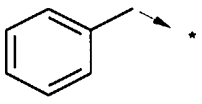
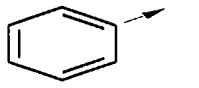
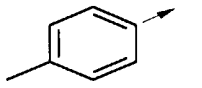
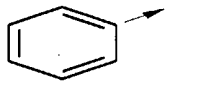
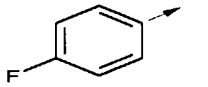
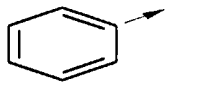
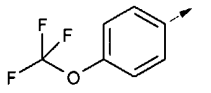
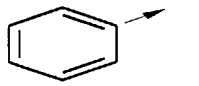
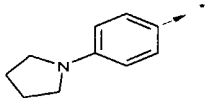
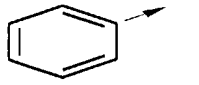
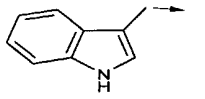
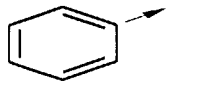
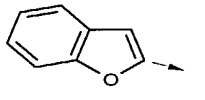
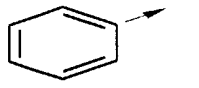
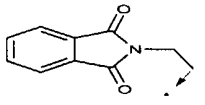
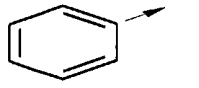
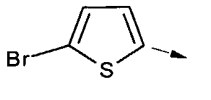
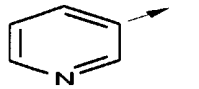
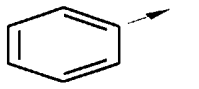


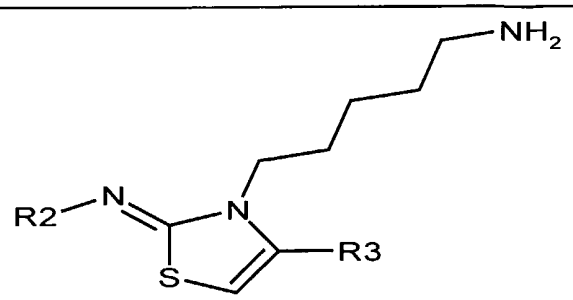
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
73			93,4	3,83	437,2
74			95,4	3,41	402,1
75			95,7	3,32	426,2
76			92,4	3,64	452,2
77			98,1	3,66	324,2
78			91,2	3,98	388,2
79			81,9	4,09	402,2
80			96,1	4,12	388,2
81			96,1	4,03	392,2
82			94,2	4,24	415,2
83			93,3	4,39	443,3

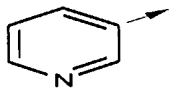
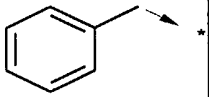
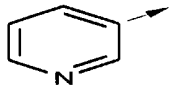
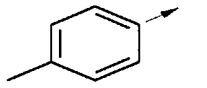
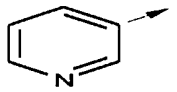
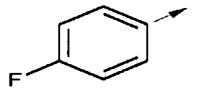
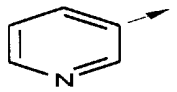
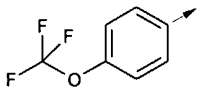
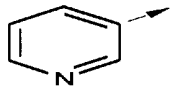
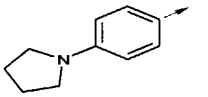
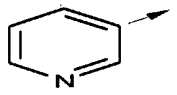
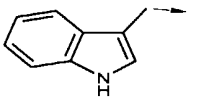
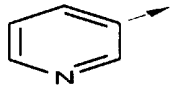
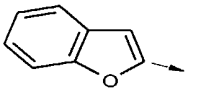
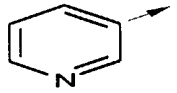
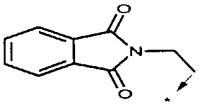
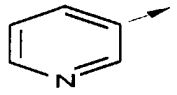
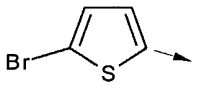
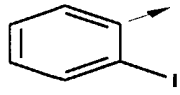
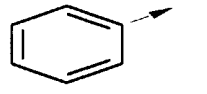
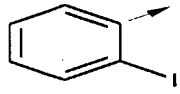
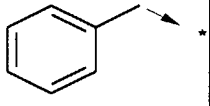


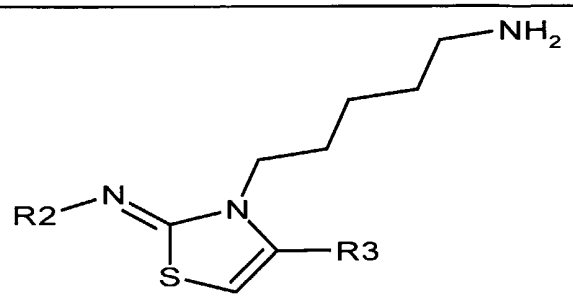
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
84			96,3	4,28	408,1
85			94,2	4.0	432,2
86			95,6	4,7	458,1

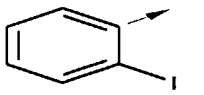
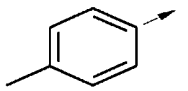
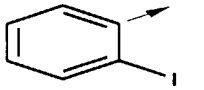
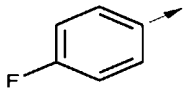
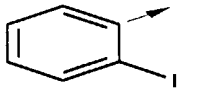
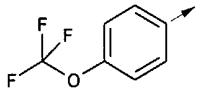
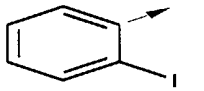
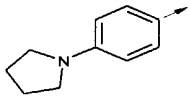
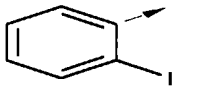
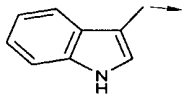
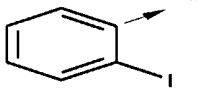
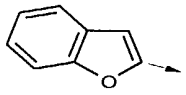
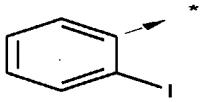
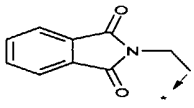
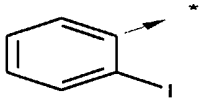
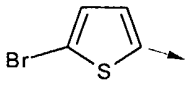
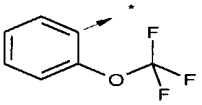
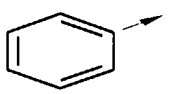
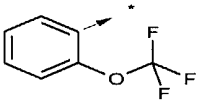
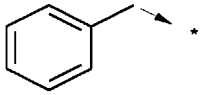
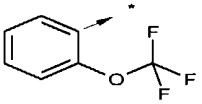
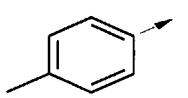


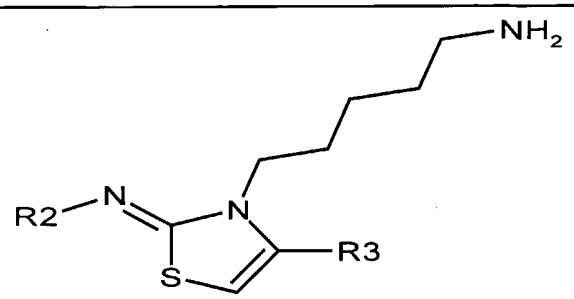
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
87			97	3,35	338,2
88			94	3,51	352,3
89			94	3,58	352,3
90			97	3,42	356,2
91			86	4,01	422,2
92			96	3,99	407,3
93			7	3,65	391,3
94			92	4,11	378,2
95			95	3,43	435,2
96			97	3,91	422,1
97			43	3,19	339,2

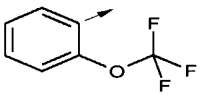
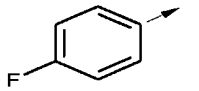
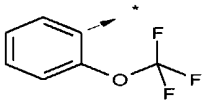
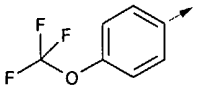
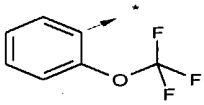
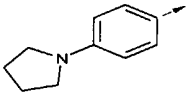
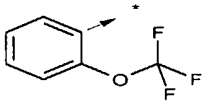
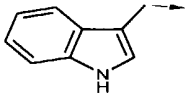
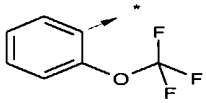
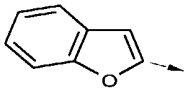
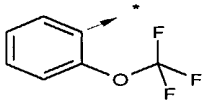
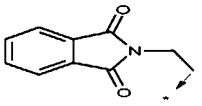
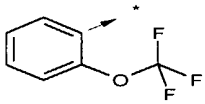
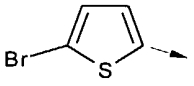
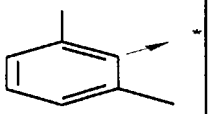
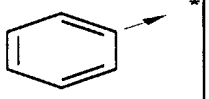
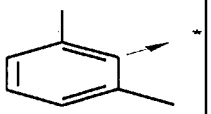
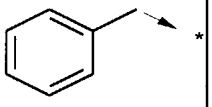
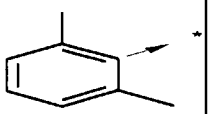
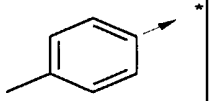
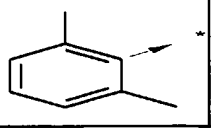
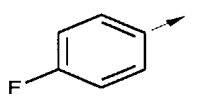


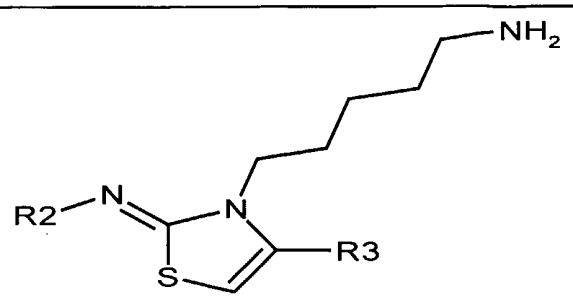
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
98			32	3,33	353,2
99			39	3,45	353,2
100			39	3,28	357,2
101			42	3,8	423,2
102			41	3,89	408,2
103			14	3,43	392,2
104			39	3,62	379,2
105			28	3,2	436,2
106			35	3,56	423,1
107			95	4,65	464,1
108			89	4,64	478,2

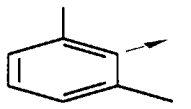
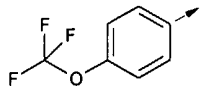
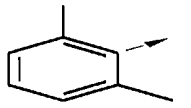
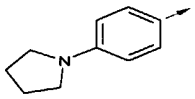
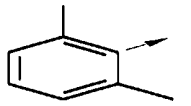
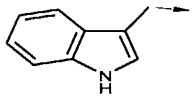
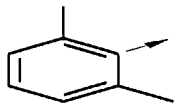
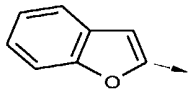
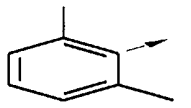
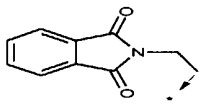
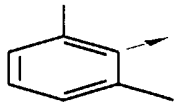
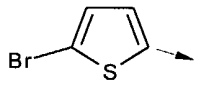
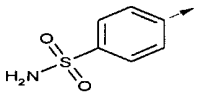
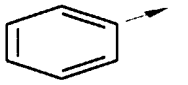
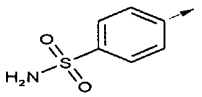
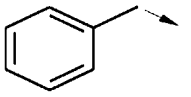
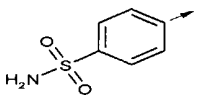
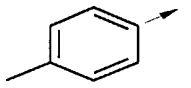
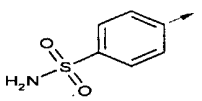
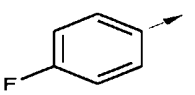
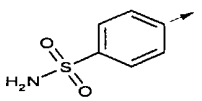
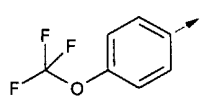


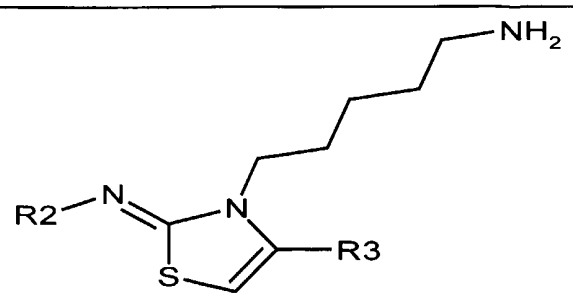
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
109			82	4,88	478,1
110			92	4,76	482,1
111			90	5,41	548,1
112			86	5,13	533,2
113			9	4,5	517,1
114			95	5,49	504,1
115			80	4,4	561,1
116			89	5,4	548.0
117			96	4,85	422,2
118			91	4,86	436,2
119			88	5,08	436,2

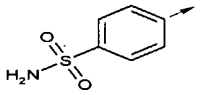
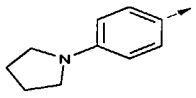
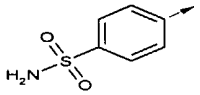
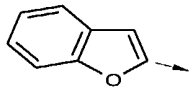
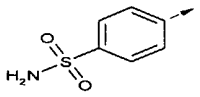
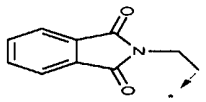
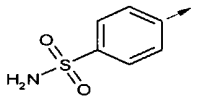
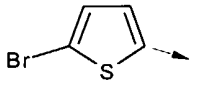
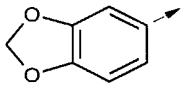
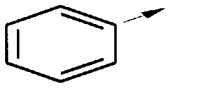
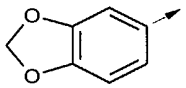
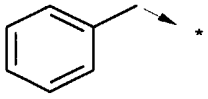
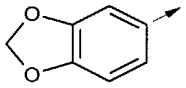
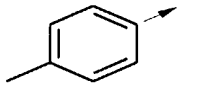
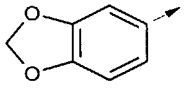
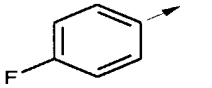
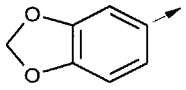
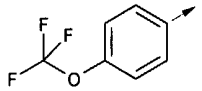
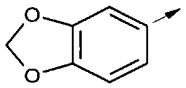
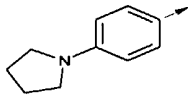
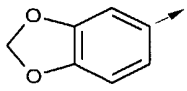
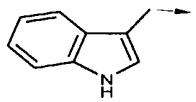


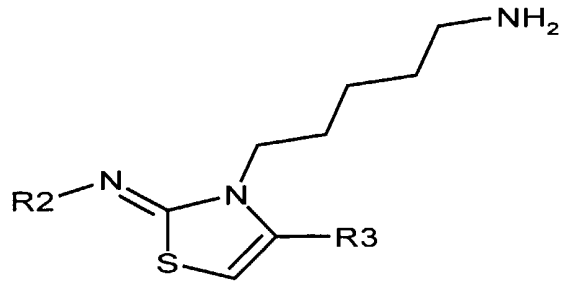
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
120			95	4,96	440,2
121			81	5,56	506,2
122			83	5,34	491,2
123			3	4,7	475,3
124			91	5,59	462,2
125			92	4,61	519,2
126			92	5,52	506,1
127			98	3,63	366,3
128			97	3,76	380,3
129			98	3,82	380,3
130			98	3,67	384,2

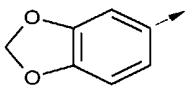
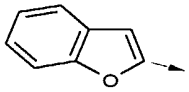
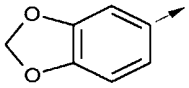
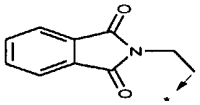
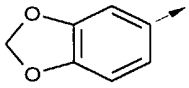
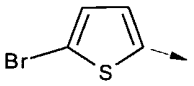
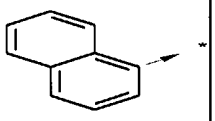
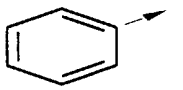
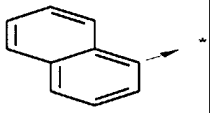
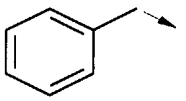
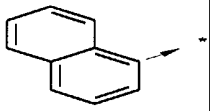
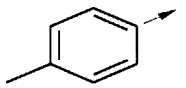
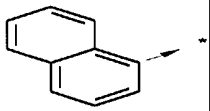
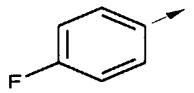
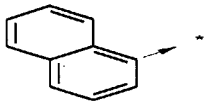
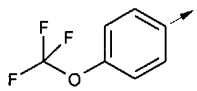
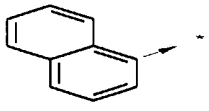
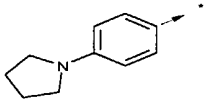
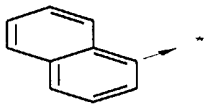
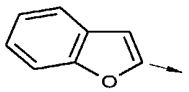
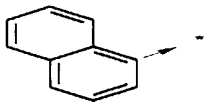
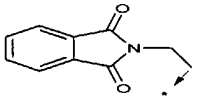


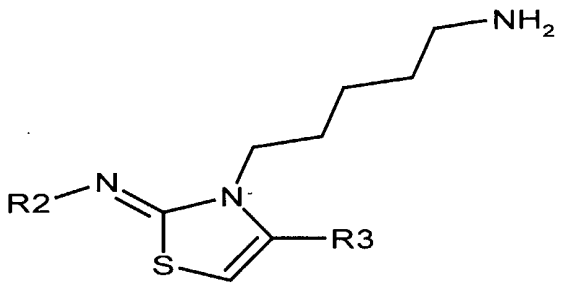
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
131			97	4,16	450,2
132			96	4,2	435,3
133			21	3,9	419,3
134			88	4,28	406,2
135			97	3,68	463,3
136			82	4,09	450,1
137			93	3,44	417,2
138			94	3,5	431,2
139			95	3,71	431,2
140			95	3,58	435,2
141			94	4,27	501,2

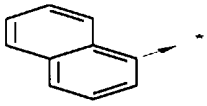
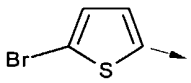


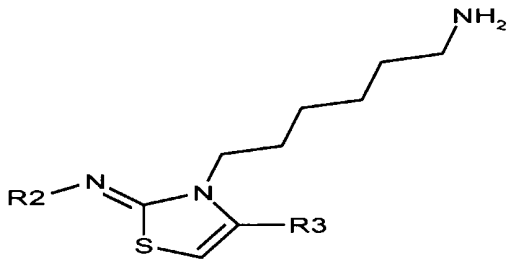
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
142			93	4,05	486,6
143			94	4,28	457,2
144			92	3,39	514,2
145			85	4,16	501,1
146			97	3,36	382,2
147			94	3,53	396,2
148			97	3,6	396,2
149			97	3,43	400,2
150			97	3,95	466,2
151			95	4,01	451,3
152			15	3,57	435,2

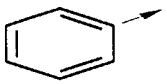
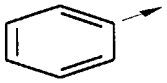
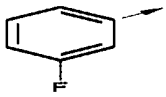
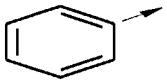
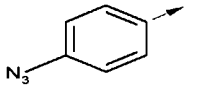
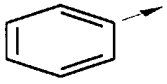
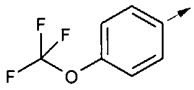
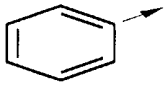
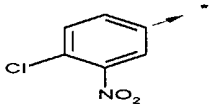
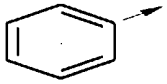
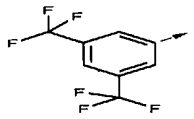
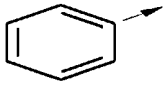
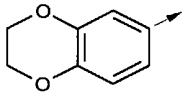
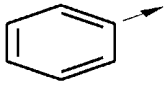
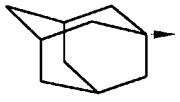
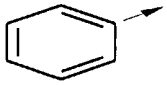
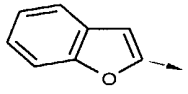
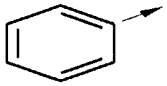
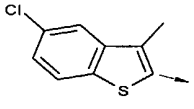
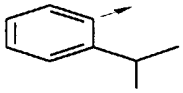


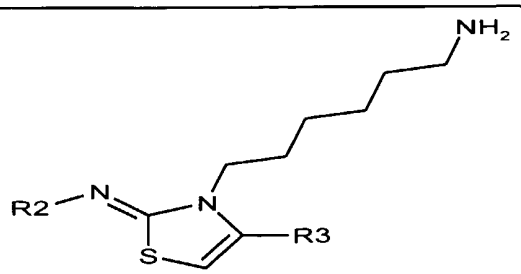
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
153			94	4.0	422,2
154			95	3,45	479,3
155			95	3,84	466,1
156			96	4,11	388,2
157			90	4,14	402,2
158			96	4,31	402,2
159			96	4,21	406,2
160			97	4,83	472,3
161			95	4,57	457,3
162			96	5,12	428,2
163			88	4,01	485,3

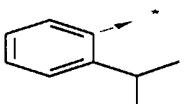
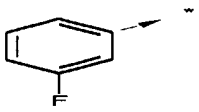
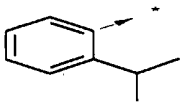
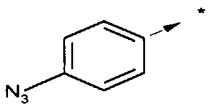
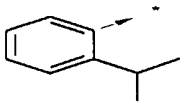
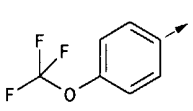
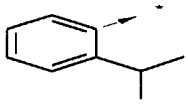
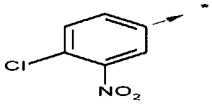
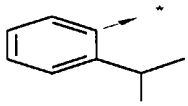
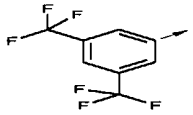
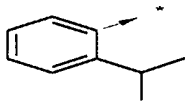
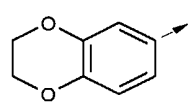
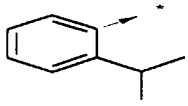
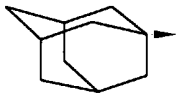
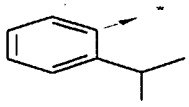
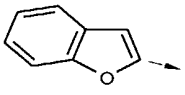
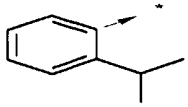
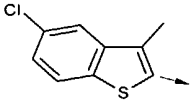
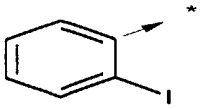
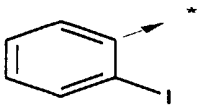
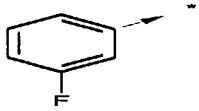


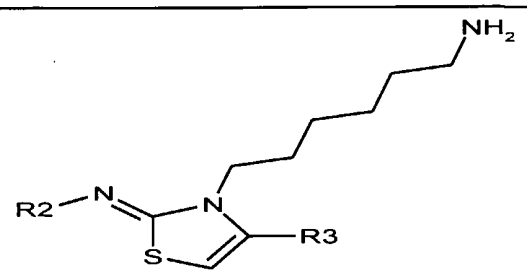
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
164			97	4,91	472,1

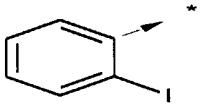
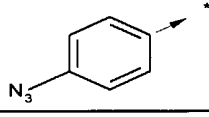
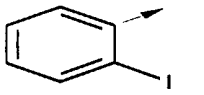
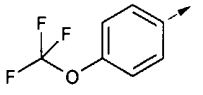
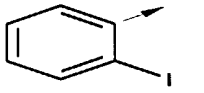
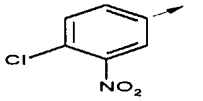
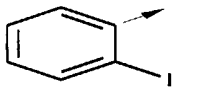
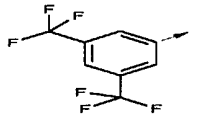
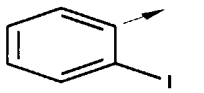
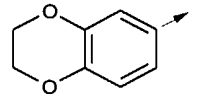
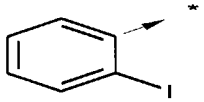
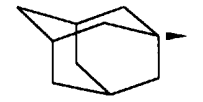
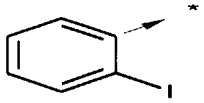
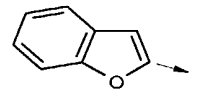
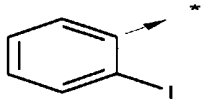
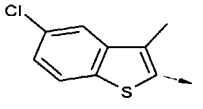
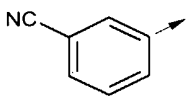
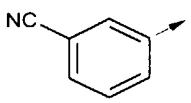
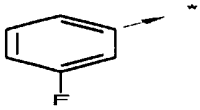
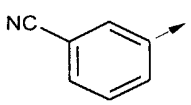
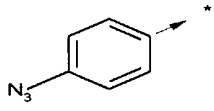


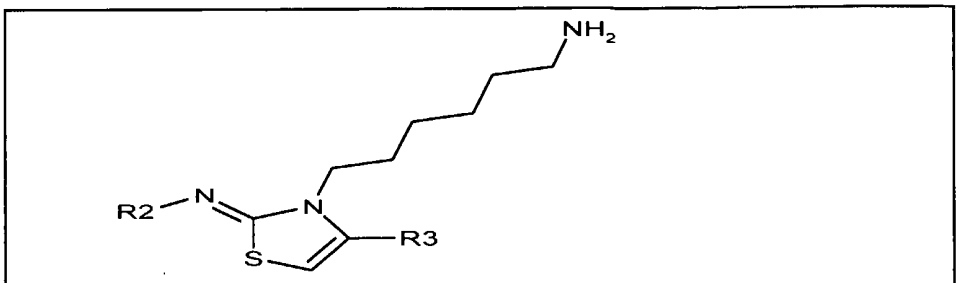
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
165			93	3,52	332,3
166			99	3,76	370,3
167			97	3,9	393,3
168			98	4,25	436,2
169			98	4,14	431,2
170			99	4,79	488,2
171			98	3,74	410,2
172			98	4,28	410,3
173			98	4,38	392,2
174			98	4,73	456,2
175			98	4,06	374,3

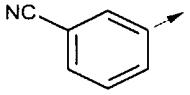
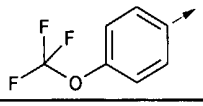
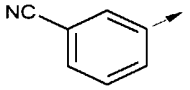
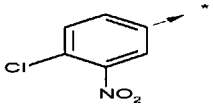
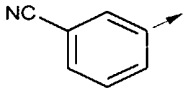
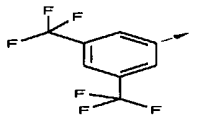
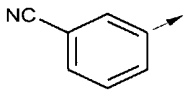
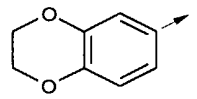
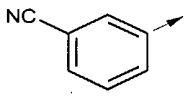
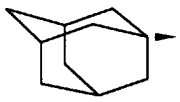
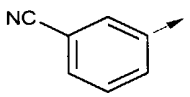
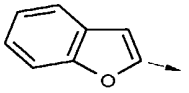
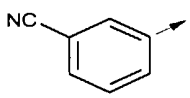
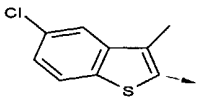
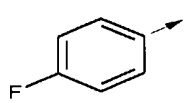
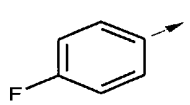
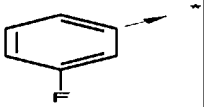
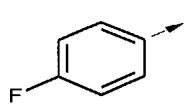
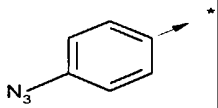
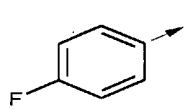
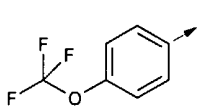


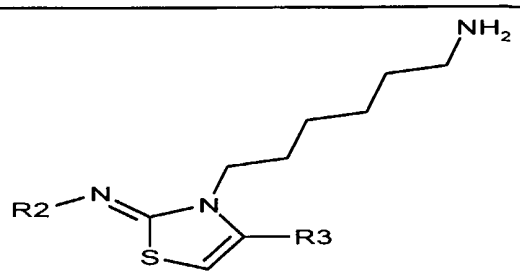
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
176			98	4,37	412,3
177			97	4,46	435,3
178			98	4,8	478,3
179			99	4,78	473,3
180			94	5,43	530,3
181			97	4,27	452,3
182			85	4,73	452,4
183			98	5,07	434,3
184			93	5,33	498,3
185			98	4,61	458,2
186			97	5,23	496,1

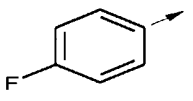
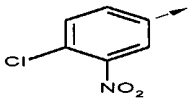
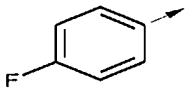
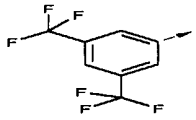
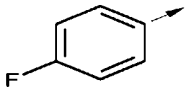
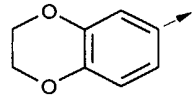
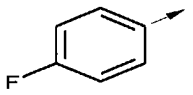
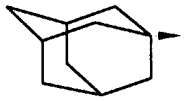
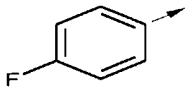
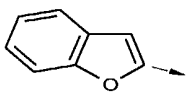
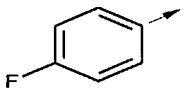
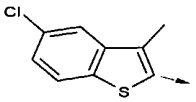
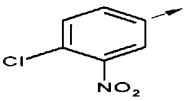
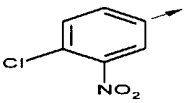
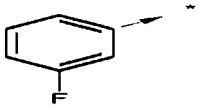
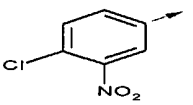
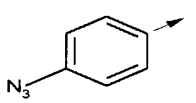
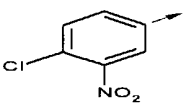
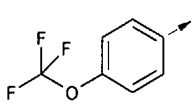
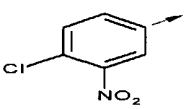
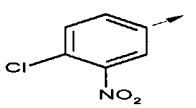


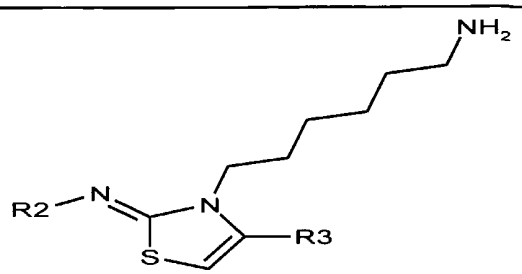
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
187			96	5,34	519,1
188			97	5,72	562,1
189			98	5,57	557,1
190			96	6,16	614,1
191			96	4,97	536,1
192			85	5,67	536,2
193			96	5,86	518,1
194			97	6,32	582,1
195			96	4,16	357,3
196			98	4,74	395,2
197			97	4,86	418,2

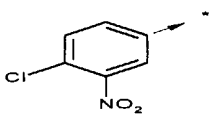
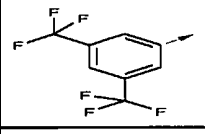
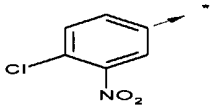
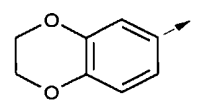
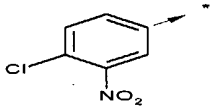
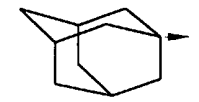
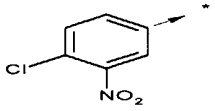
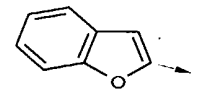
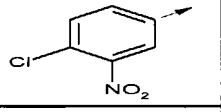
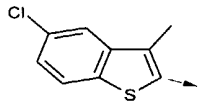
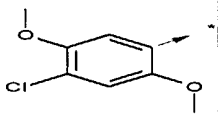
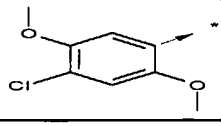
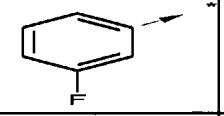
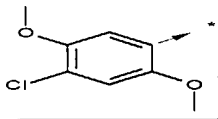
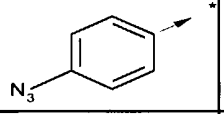
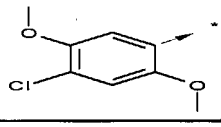
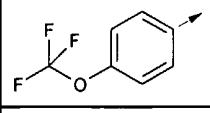
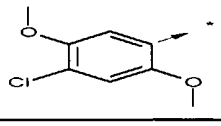
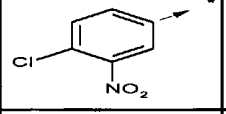
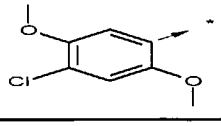
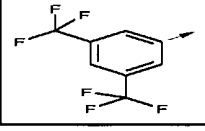


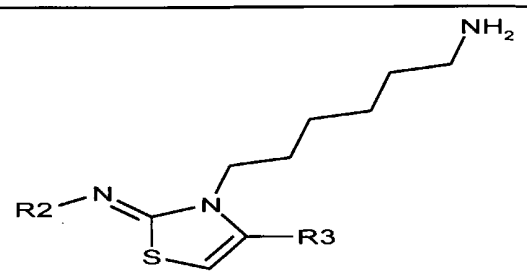
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
198			98	5,26	461,2
199			98	5,12	456,2
200			97	5,72	513,2
201			96	4,51	435,2
202			98	5,18	435,3
203			95	5,37	417,2
204			95	5,84	481,2
205			96	3,63	350,3
206			98	3,95	388,2
207			95	4,07	411,2
208			98	4,44	454,2

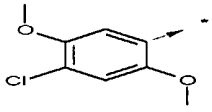
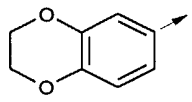
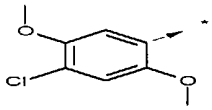
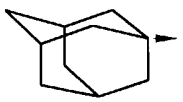
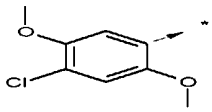
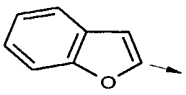
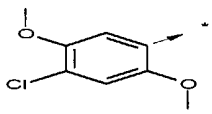
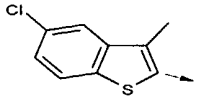
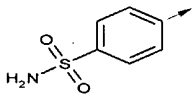
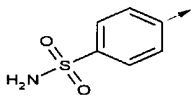
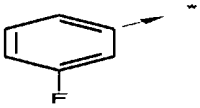
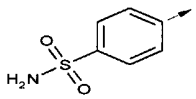
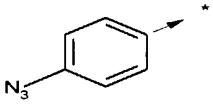
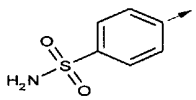
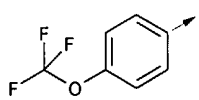
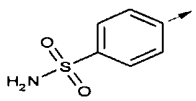
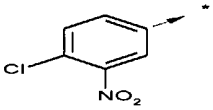
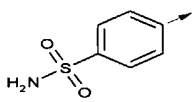
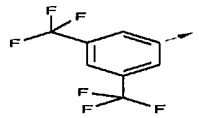
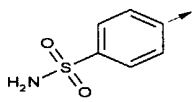
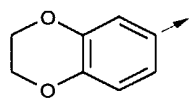


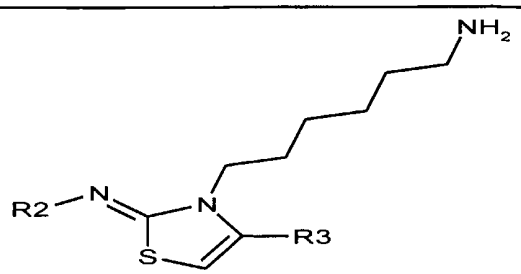
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
209			97	4,38	449,2
210			89	5,03	506,2
211			96	3,87	428,2
212			97	4,4	428,3
213			96	4,63	410,2
214			96	4,96	474,2
215			94	5,38	411,2
216			98	5,63	449,2
217			96	5,77	472,2
218			98	6,04	515,2
219			98	5,74	510,1

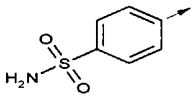
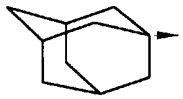
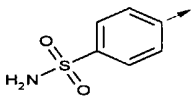
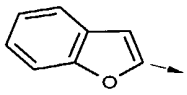
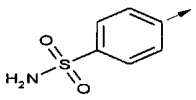
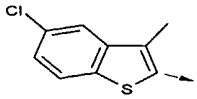


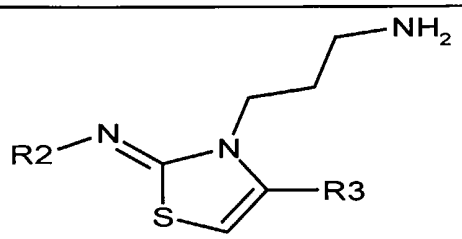
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
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221			98	5,53	489,2
222			96	6,38	489,3
223			97	6.0	471,2
224			98	6,49	535,1
225			98	3,99	426,3
226			98	4,34	464,2
227			96	4,43	487,3
228			97	4,78	530,2
229			98	4,76	525,2
230			96	5,36	582,2

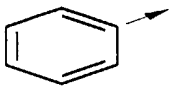
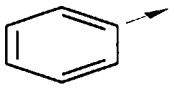
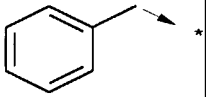
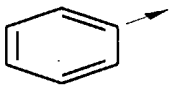
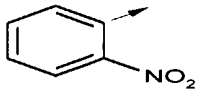
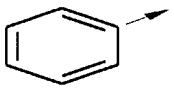
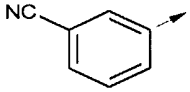
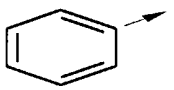
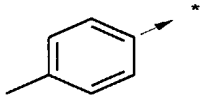
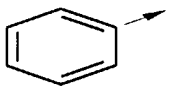
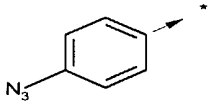
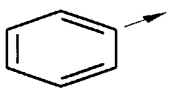
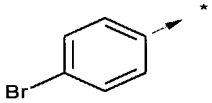
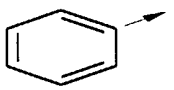
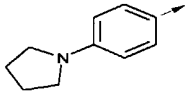
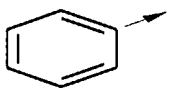
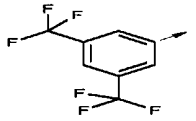
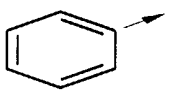
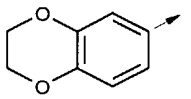
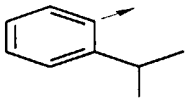


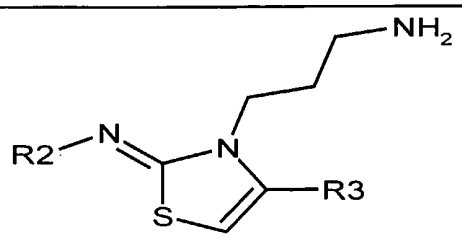
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
231			95	4,23	504,3
232			97	4,7	504,3
233			98	4,99	486,2
234			97	5,3	550,2
235			96	3,44	411,2
236			95	3,94	449,2
237			96	4,11	472,3
238			95	4,52	515,2
239			95	4,39	510,2
240			94	5,01	567,2
241			96	3,74	489,2

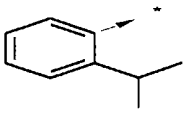
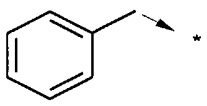
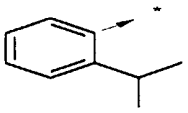
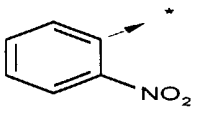
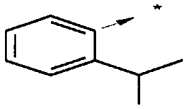
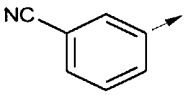
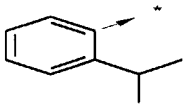
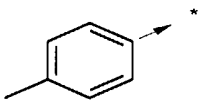
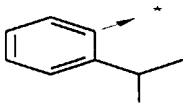
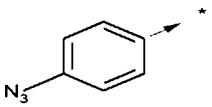
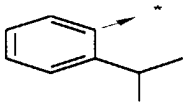
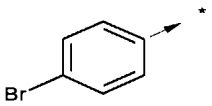
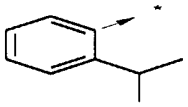
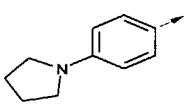
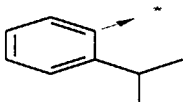
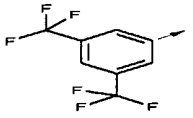
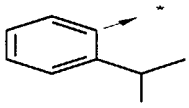
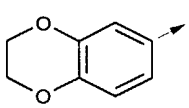
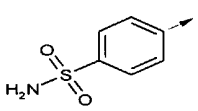
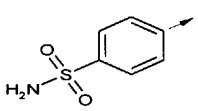
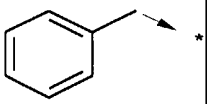


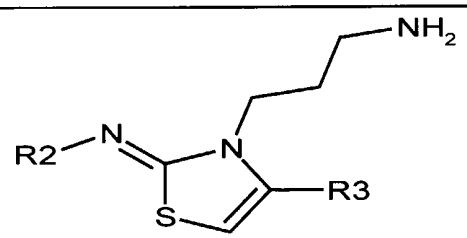
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
242			96	4,41	489,3
243			96	4,56	471,2
244			97	5,01	535,2

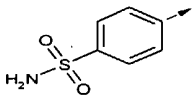
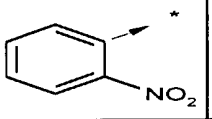
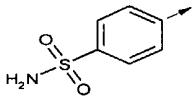
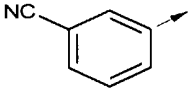
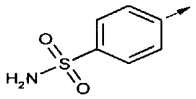
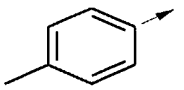
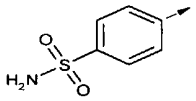
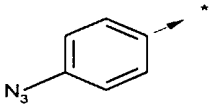
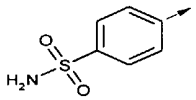
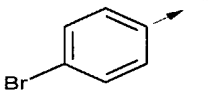
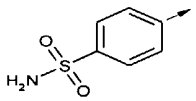
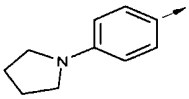
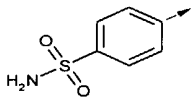
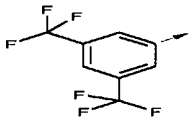
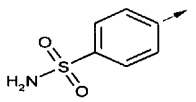
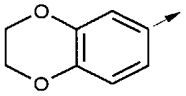
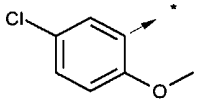
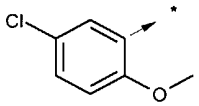
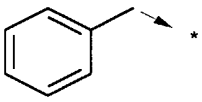
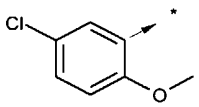
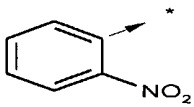


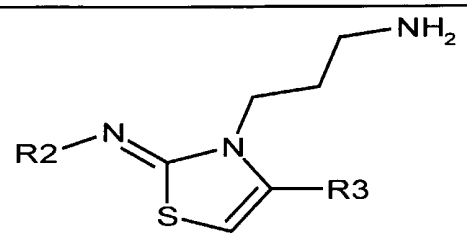
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
245			98,1	3,2	290,2
246			96,9	3,78	324,2
247			69,3	3,88	355,2
248			99,3	3,79	335,2
249			99,4	3,86	324,2
250			98	3,97	351,2
251			98,7	4,14	388,1
252			93,5	4,24	379,3
253			82,4	5,16	446,2
254			98,8	3,7	368,2
255			98,5	3,9	332,3

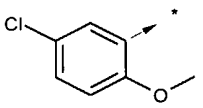
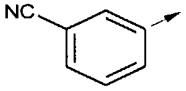
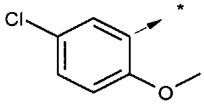
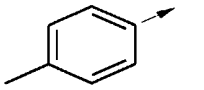
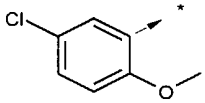
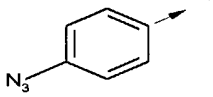
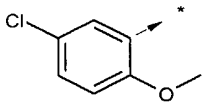
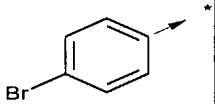
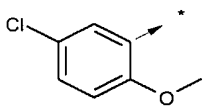
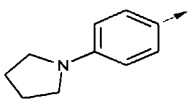
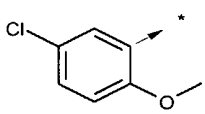
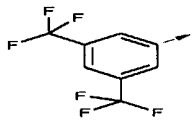
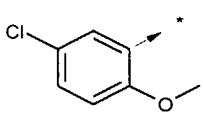
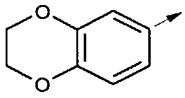
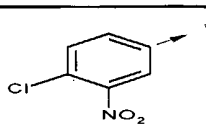
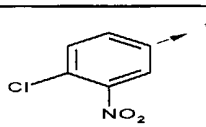
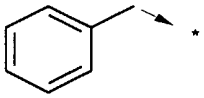
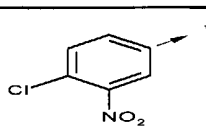
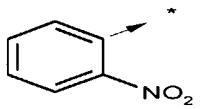
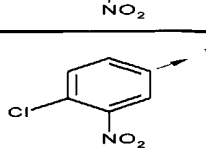
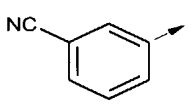


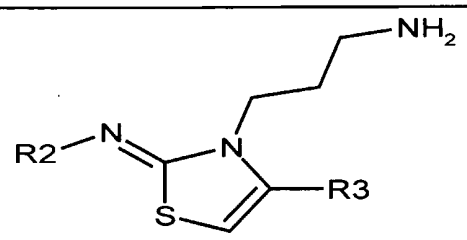
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
256			92,3	4,4	366,3
257			82,3	4,55	397,2
258			98,4	4,48	377,3
259			97,3	4,49	366,3
260			95,4	4,59	393,3
261			98,7	4,77	430,2
262			90,9	4,76	421,3
263			98,7	5,72	488,2
264			97,7	4,33	410,3
265			98,5	3,42	369,2
266			94,9	3,91	403,2

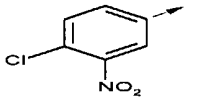
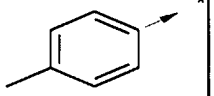
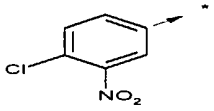
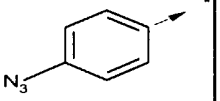
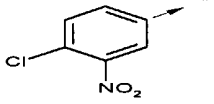
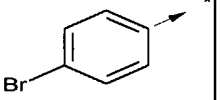
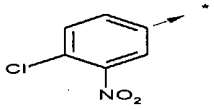
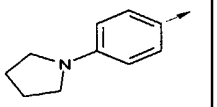
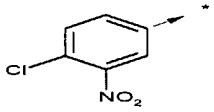
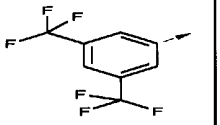
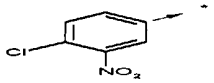
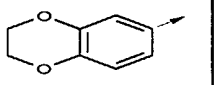
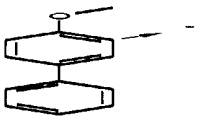
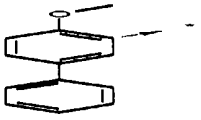
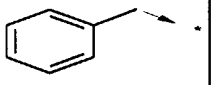
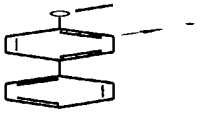
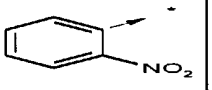
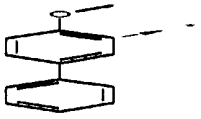
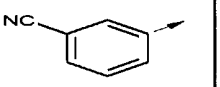
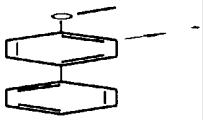
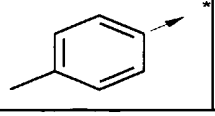


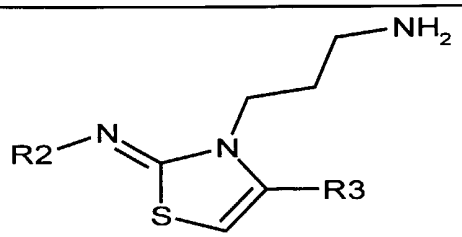
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
267			98,1	3,81	434,2
268			97,9	3,78	414,1
269			98,1	4,06	403,2
270			96,2	4,14	430,2
271			98,3	4,28	467,1
272			96,8	4,5	458,2
273			98,3	4,92	525,2
274			97,1	3,84	447,2
275			96,5	4,28	354,2
276			93,3	5,02	388,2
277			68,7	4,96	419,2

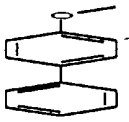
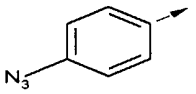
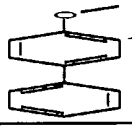
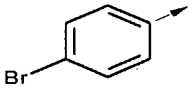
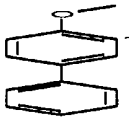
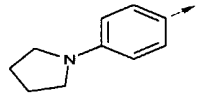
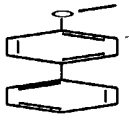
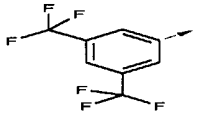
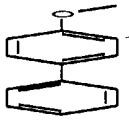
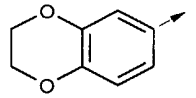
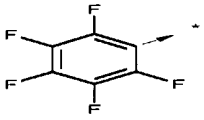
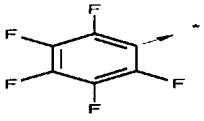
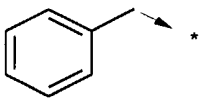
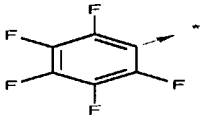
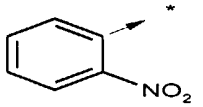
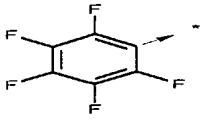
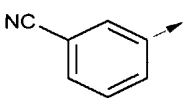
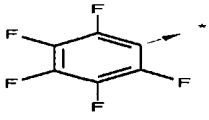
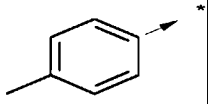
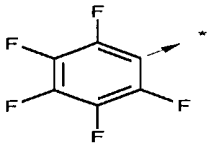
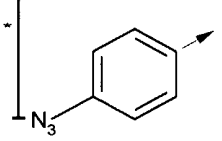


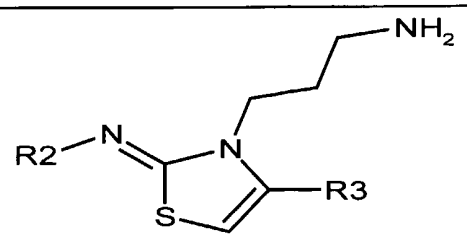
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
278			97,8	4,86	399,2
279			96	5,13	388,2
280			96,9	5,18	415,2
281			98,6	5,31	452,1
282			89,5	5,54	443,2
283			65,5	5,89	510,2
284			97,8	4,89	432,2
285			93,2	5,08	369,2
286			94,6	5,31	403,1
287			97,6	5,07	434,1
288			99,1	5,05	414,1

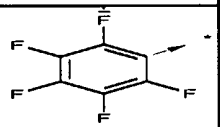
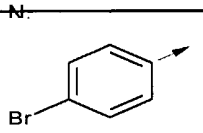
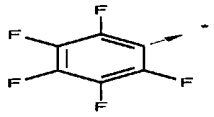
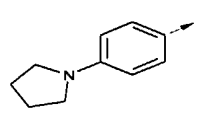
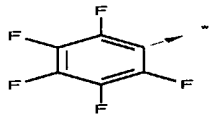
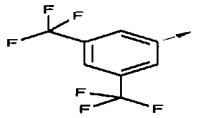
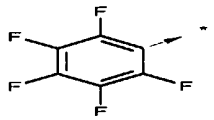
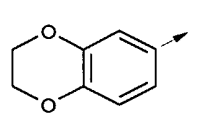
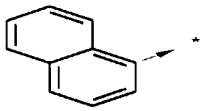
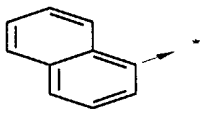
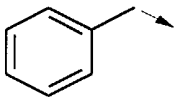
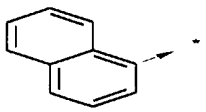
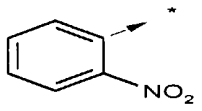
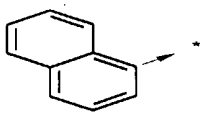
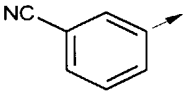
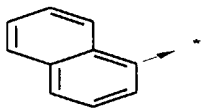
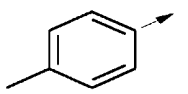
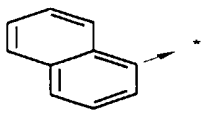
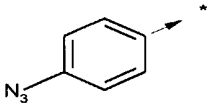
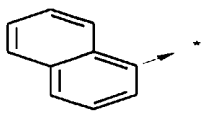
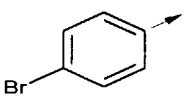


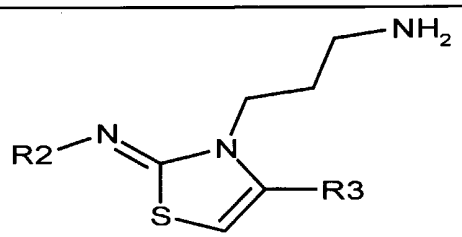
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
289			99,1	5,39	403,1
290			98,3	5,44	430,2
291			99,4	5,47	467,1
292			97,4	5,86	458,2
293			99,5	5,87	525,1
294			98,5	5,21	447,2
295			95,7	4,41	396,3
296			92,9	5,06	430,3
297			54	5,19	461,2
298			91,8	5,07	441,2
299			95,8	5,18	430,3

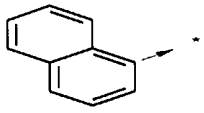
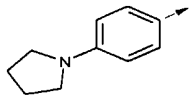
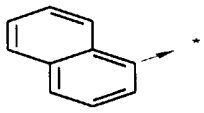
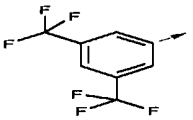
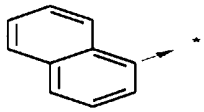
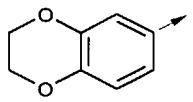


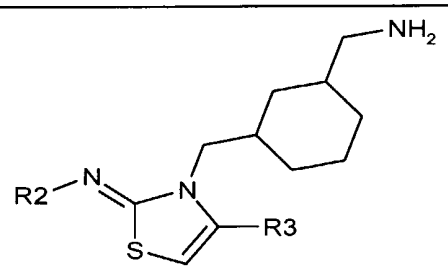
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
300			96	5,28	457,3
301			96,9	5,45	494,2
302			87	5,49	485,3
303			35,6	6,18	552,2
304			96,7	4,97	474,3
305			83,9	5,24	380,2
306			92,8	5,39	414,2
307			92	5,14	445,2
308			97,4	5,11	425,1
309			98,1	5,47	414,2
310			97,2	5,47	441,1

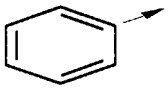
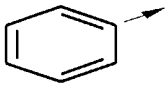
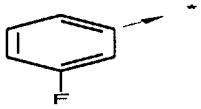
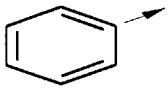
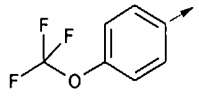
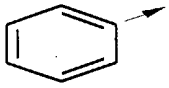
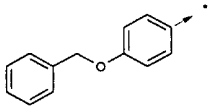
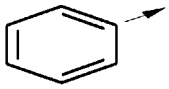
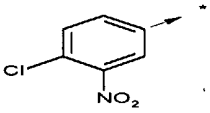
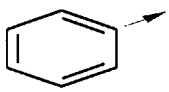
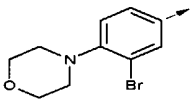
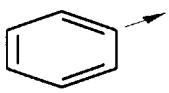
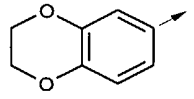
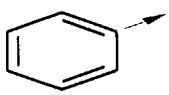
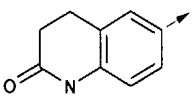
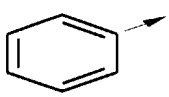
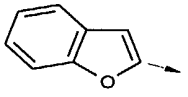
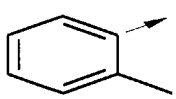
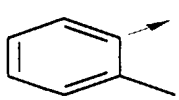
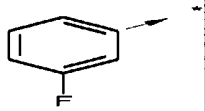


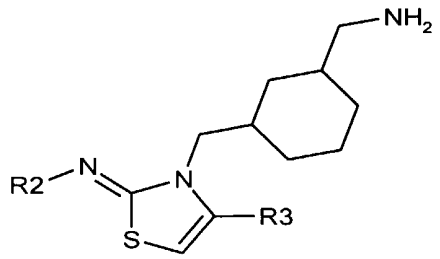
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
311			97	5,52	478,1
312			93,3	5,99	469,2
313			98,3	5,91	536,1
314			96,5	5,31	458,2
315			98,7	4,12	340,3
316			93,4	4,66	374,2
317			98,9	4,78	405,2
318			97,8	4,71	385,2
319			98,1	4,78	374,2
320			97,2	4,9	401,2
321			98,8	5,09	438,1

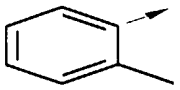
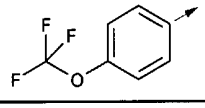
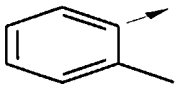
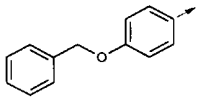
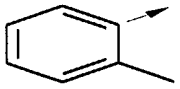
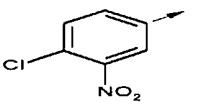
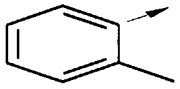
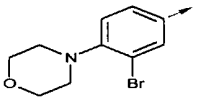
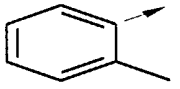
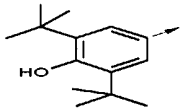
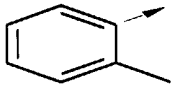
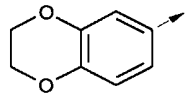
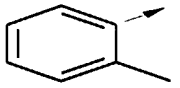
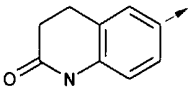
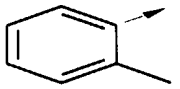
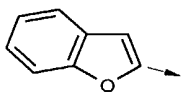
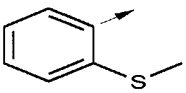
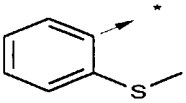
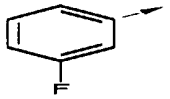
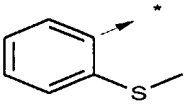
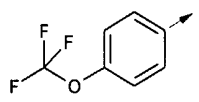


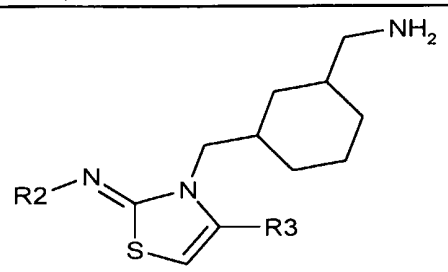
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
322			95,8	5,07	429,3
323			98,5	5,82	496,2
324			97,5	4,59	418,2

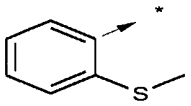
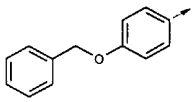
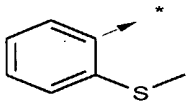
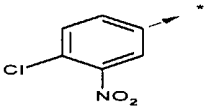
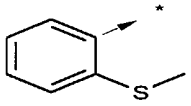
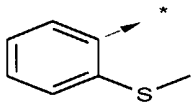
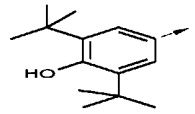
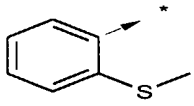
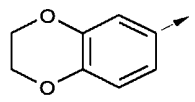
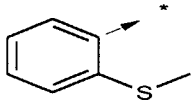
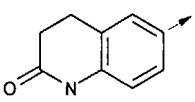
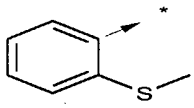
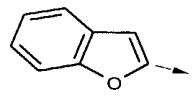
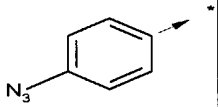
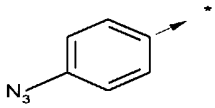
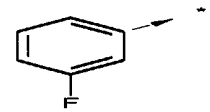
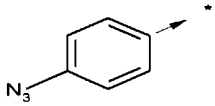
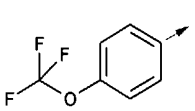
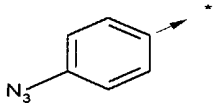
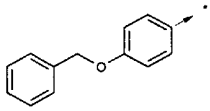


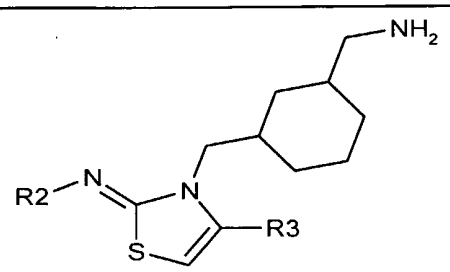
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
325			93	3,71	358,2
326			68 + 30	4,0 + 4,1	396,2
327			69 + 31	4,5 + 4,6	462,2
328			66 + 27	4,7 + 4,8	484,3
329			67 + 31	4,4 + 4,6	457,2
330			67 + 30	4,3 + 4,5	541,2
331			62 + 33	3,9 + 4,0	436,2
332			64 + 30	3,5 + 3,6	447,3
333			65 + 30	4,7 + 4,9	418,2
334			68 + 29	3,8 + 3,9	372,3
335			69 + 29	4,2 + 4,3	410,2

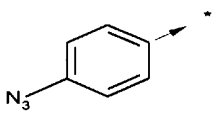
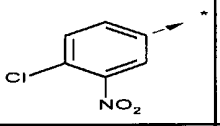
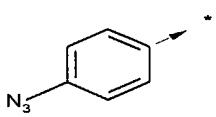
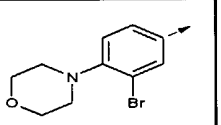
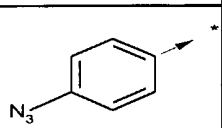
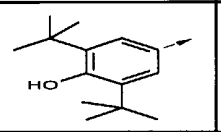
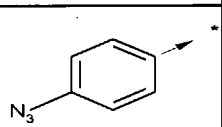
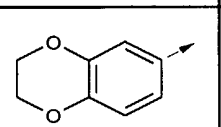
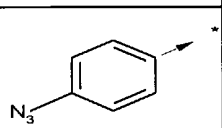
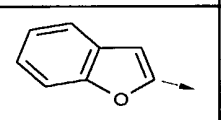
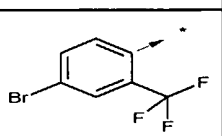
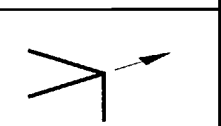
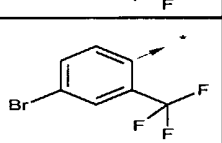
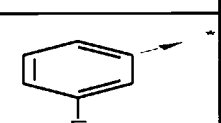
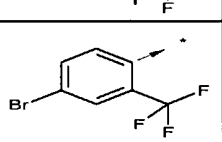
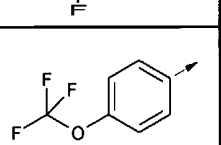
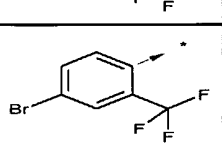
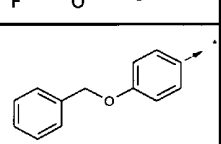
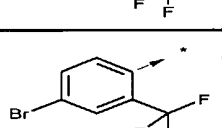
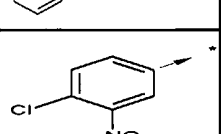
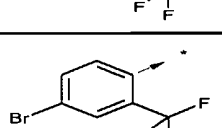
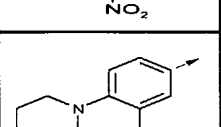


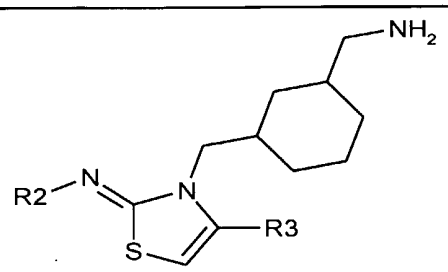
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
336			68 + 30	4,6 + 4,8	476,2
337			61 + 32	4,8 + 4,89	498,3
338			66 + 30	4,55 + 4,71	471,2
339			68 + 29	4,46 + 4,58	555,2
340			22 + 11	5,13 + 5,22	520,4
341			67 + 24	4,09 + 4,14	450,3
342			71 + 23	3,7 + 3,74	461,3
343			67 + 31	4,82 + 5,02	432,2
344			66 + 31	4,14 + 4,39	404,3
345			65 + 31	4,74 + 4,94	442,2
346			65 + 31	5,25 + 5,47	508,2

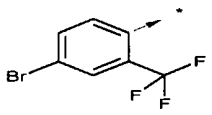
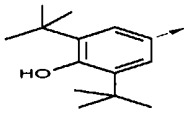
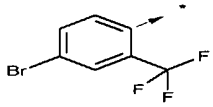
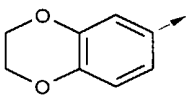
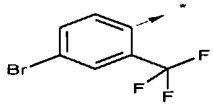
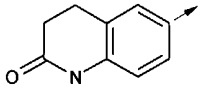
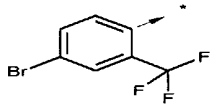
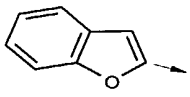
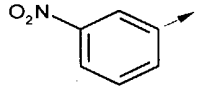
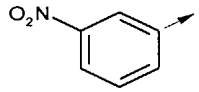
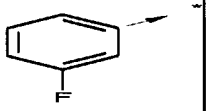
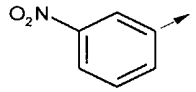
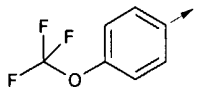
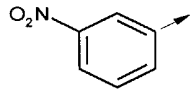
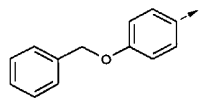
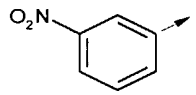
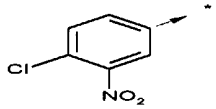
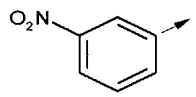
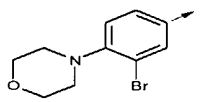
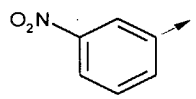
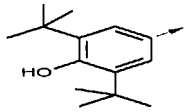


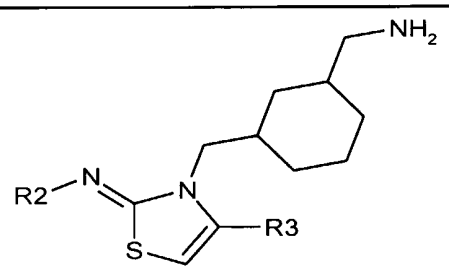
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
347			62 + 29	5,28 + 5,5	530,3
348			65 + 30	5,21 + 5,38	503,2
349			63 + 30	5,03 + 5,24	587,2
350			64 + 30	5,59 + 5,84	552,3
351			58 + 28	4,49 + 4,66	482,3
352			64 + 26	4,01 + 4,11	493,3
353			65 + 31	5,54 + 5,71	464,2
354			57 + 24	4,08 + 4,19	399,3
355			62 + 28	4,52 + 4,7	437,2
356			62 + 28	5 + 5,2	503,2
357			58 + 26	5,08 + 5,25	525,3

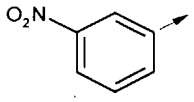
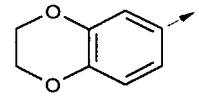
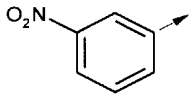
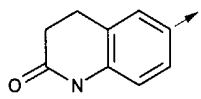
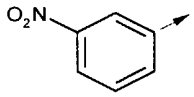
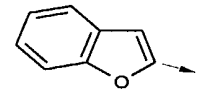
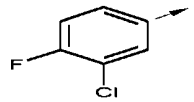
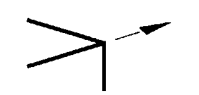
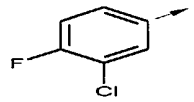
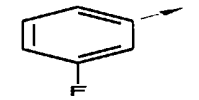
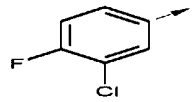
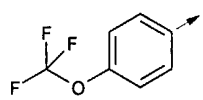
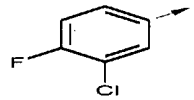
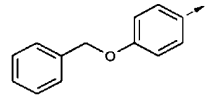
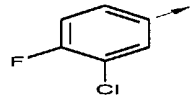
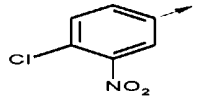
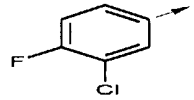
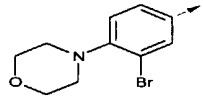
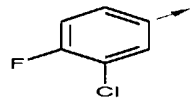
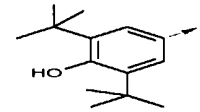
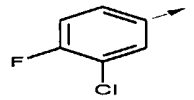
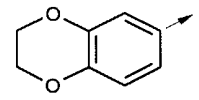


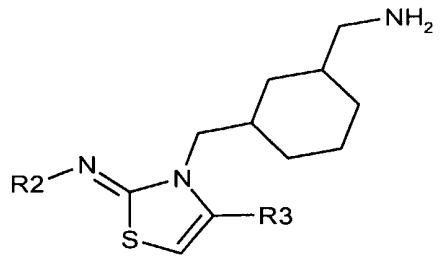
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
358			62 + 29	4,98 + 5,19	498,2
359			62 + 29	4,82 + 4,99	582,2
360			62 + 28	5,39 + 5,58	547,3
361			56 + 26	4,37 + 4,49	477,3
362			64 + 32	5,32 + 5,55	459,2
363			94	6,36	505,2
364			98	6,39	542,1
365			25 + 72	6,74 + 6,77	608,1
366			92	7,07	630,2
367			23 + 73	6,38 + 6,42	603,1
368			26 + 69	6,73 + 6,76	687,1

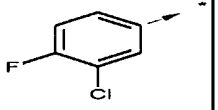
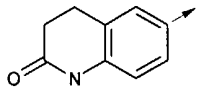
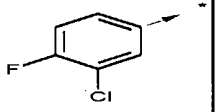
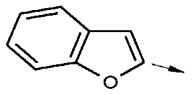
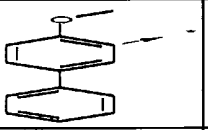
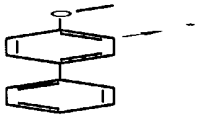
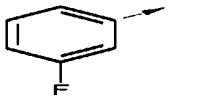
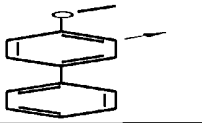
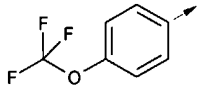
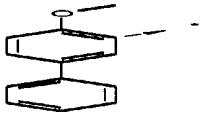
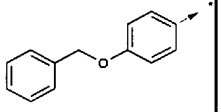
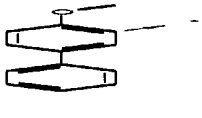
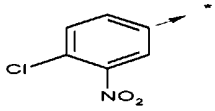
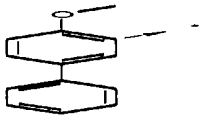
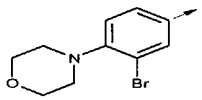
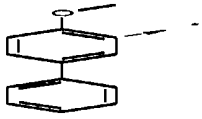
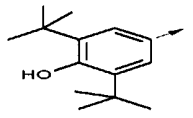
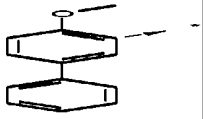
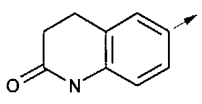
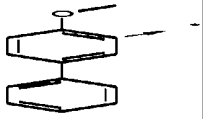
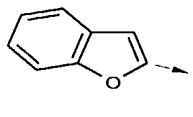


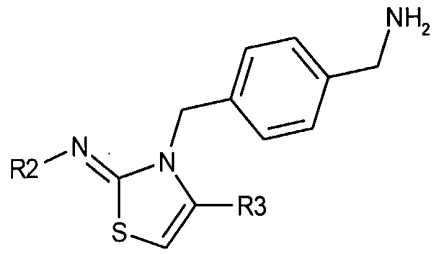
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
369			60	7,55	652,3
370			82	6,39	582,1
371			94	5,74	593,2
372			22 + 73	6,68 + 6,74	564,1
373			59 + 27	4,88 + 5,13	403,3
374			67 + 30	5,35 + 5,44	441,2
375			64 + 34	5,84 + 5,92	507,2
376			62 + 28	6 + 6,13	529,3
377			97	5,58	502,2
378			65 + 32	5,71 + 5,8	586,2
379			49 + 23	6,45 + 6,58	551,3

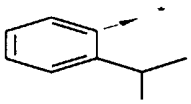
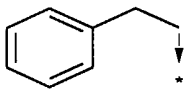
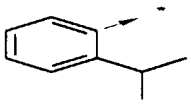
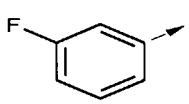
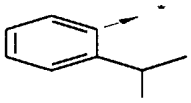
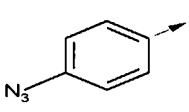
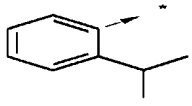
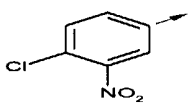
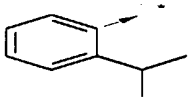
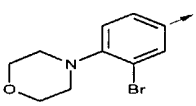
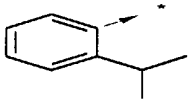
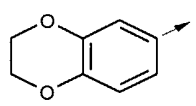
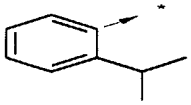
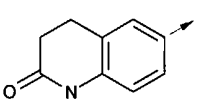
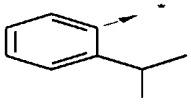
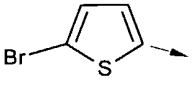
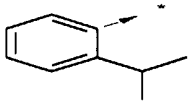
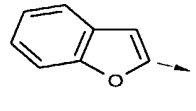
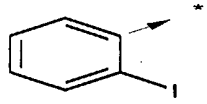
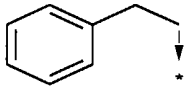
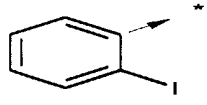
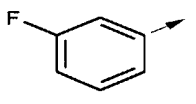


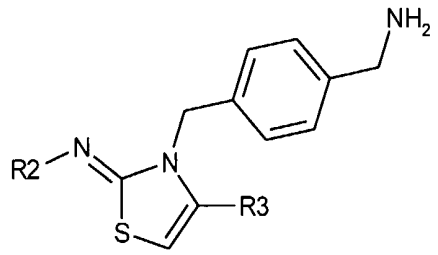
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
380			61 + 26	5,18 + 5,3	481,2
381			45 + 21	4,57 + 4,68	492,3
382			84	5,9	463,2
383			56 + 26	4,65 + 4,89	410,2
384			64 + 30	5,29 + 5,47	448,2
385			65 + 30	5,78 + 5,95	514,2
386			63 + 27	5,8 + 6,02	536,2
387			65 + 31	5,71 + 5,81	509,1
388			62 + 32	5,59 + 5,79	593,1
389			30 + 14	6,22 + 6,45	558,3
390			57 + 26	5,01 + 5,2	488,2

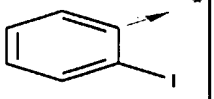
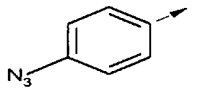
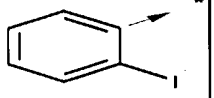
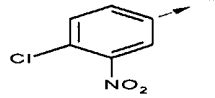
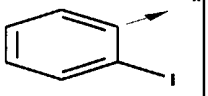
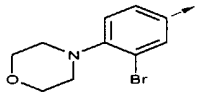
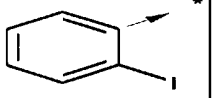
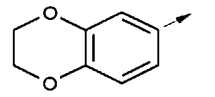
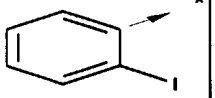
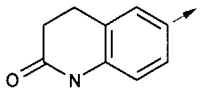
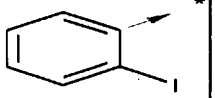
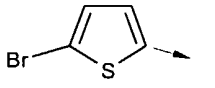
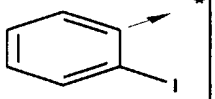
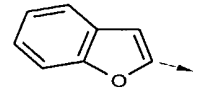
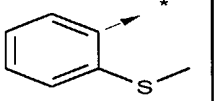
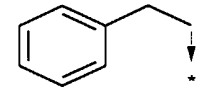
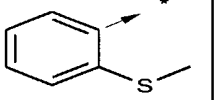
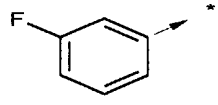
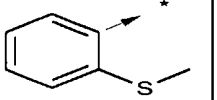
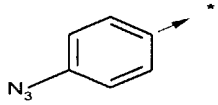
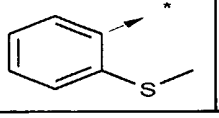
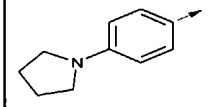


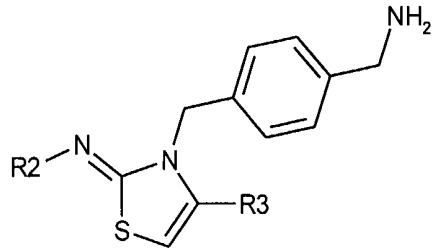
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
391			54 + 26	4,46 + 4,61	499,2
392			27 + 11	6,09 + 6,18	470,2
393			63 + 29	4,53 + 4,6	464,3
394			65 + 30	4,78 + 4,93	502,3
395			61 + 28	5,16 + 5,35	568,2
396			59 + 25	5,3 + 5,42	590,3
397			60 + 30	5,12 + 5,34	563,2
398			63 + 32	5,01 + 5,17	647,2
399			59 + 26	5,55 + 5,7	612,4
400			52 + 14	4,35 + 4,4	553,3
401			61 + 29	5,36 + 5,64	524,3

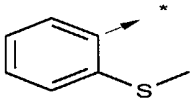
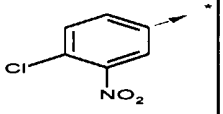
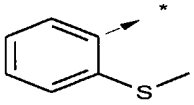
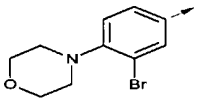
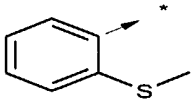
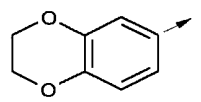
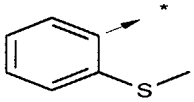
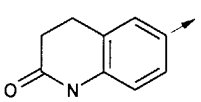
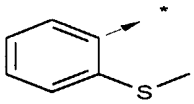
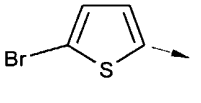
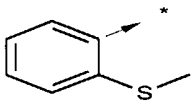
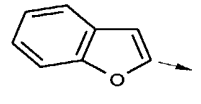
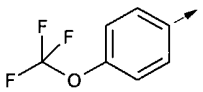
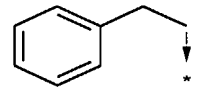
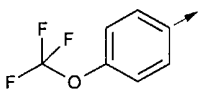
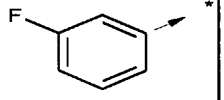
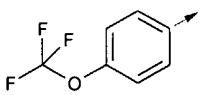
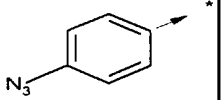
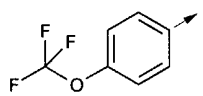
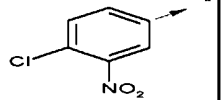
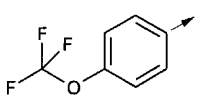
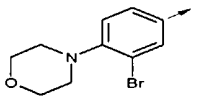


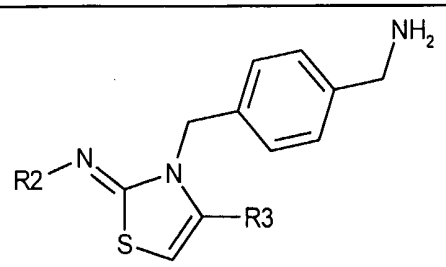
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
402			88,5	4,52	442,1
403			94,6	4,72	432,15
404			95	4,78	455,16
405			98,6	5,19	493,12
406			95,8	4,99	577,11
407			95,1	4,44	472,19
408			96,3	4.0	483,21
409			94,5	5,35	498,04
410			94,1	5,61	454,15
411			83	5,43	526,03
412			94,9	5,4	515,97

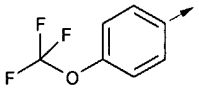
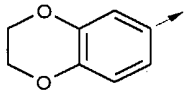
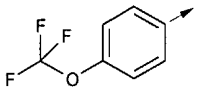
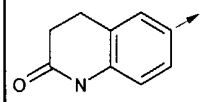
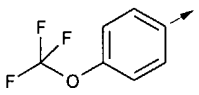
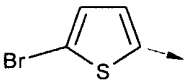
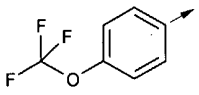
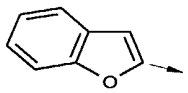
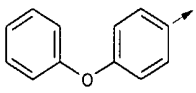
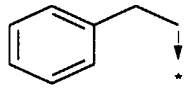
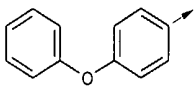
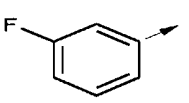
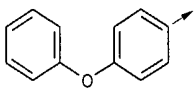
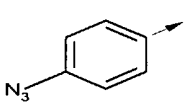
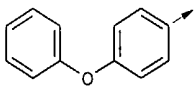
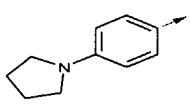
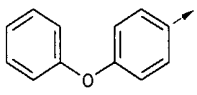
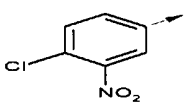
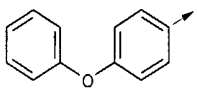
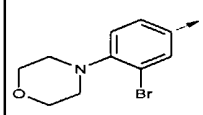
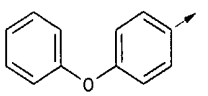
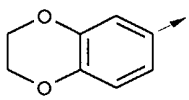


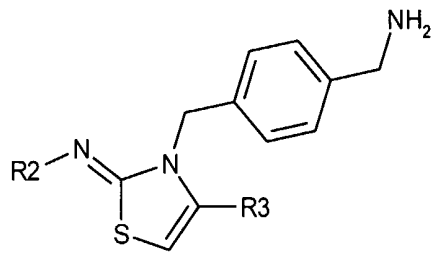
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
413			93,4	5,52	539,00
414			97,1	5,48	576,95
415			92,7	5,69	660,99
416			92,2	5,27	555,98
417			92	4,7	567,00
418			89,7	5,73	581,87
419			87,8	5,77	538,00
420			84,4	4,74	446,14
421			92,6	4,9	436,08
422			91,2	5.0	459,10
423			72,4	5.0	487,16

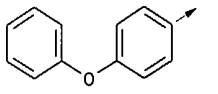
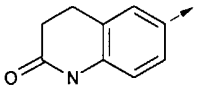
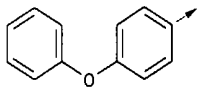
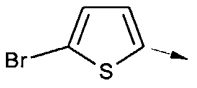
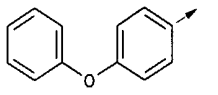
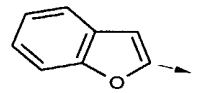
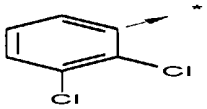
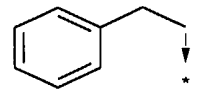
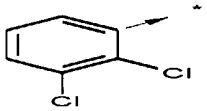
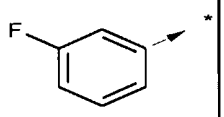
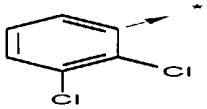
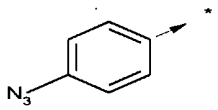
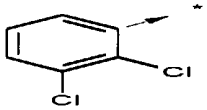
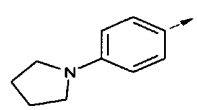
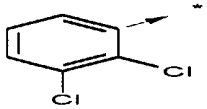
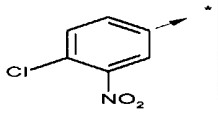
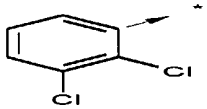
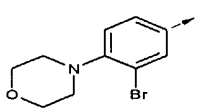
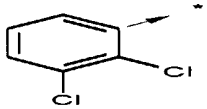
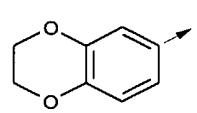
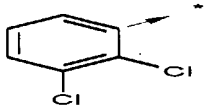
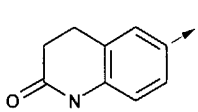


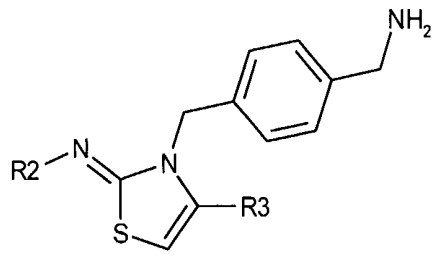
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
424			94,9	5,19	497,07
425			91,7	5,18	581,05
426			91,5	4,67	476,12
427			89,6	4,16	487,13
428			91,7	5,38	501,96
429			89,9	5,48	458,10
430			87,1	5,26	484,14
431			95,7	5,41	474,10
432			94,6	5,51	497,12
433			97,4	5,64	535,01
434			96,2	5,69	619,04

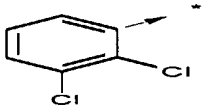
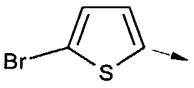
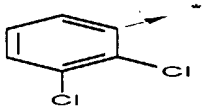
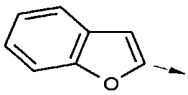
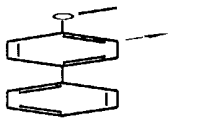
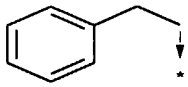
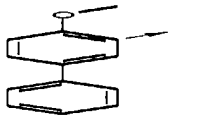
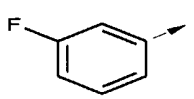
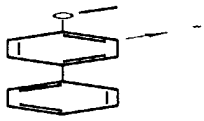
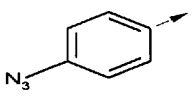
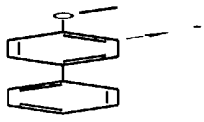
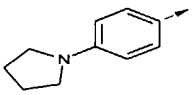
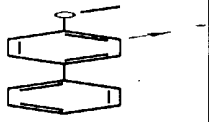
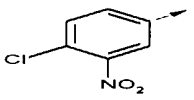
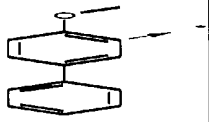
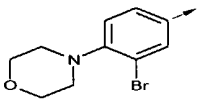
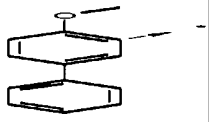
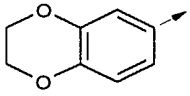
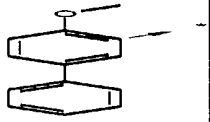
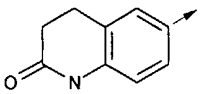
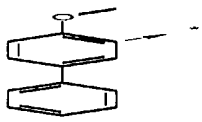
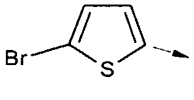


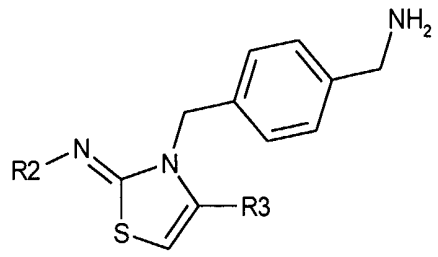
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
435			94,4	5,21	514,10
436			94,7	4,67	525,11
437			92,7	5,84	539,94
438			91	5,93	496,09
439			82,4	4,82	492,18
440			92,2	5,03	482,14
441			90,4	5,08	505,15
442			33,4	5,14	533,18
443			97,6	5,45	543,07
444			93,9	5,26	627,10
445			93,6	4,78	522,14

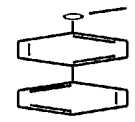
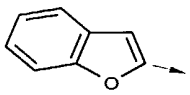
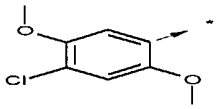
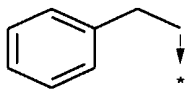
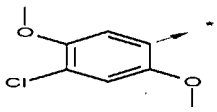
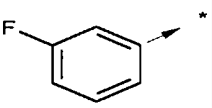
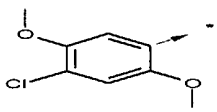
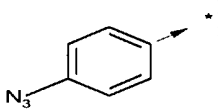
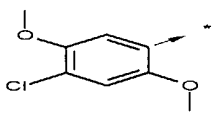
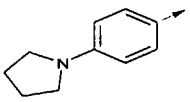
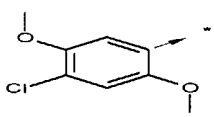
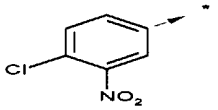
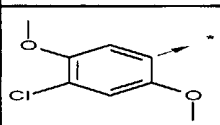
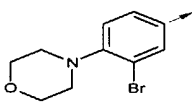
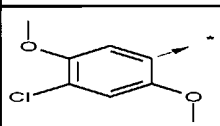
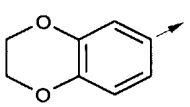
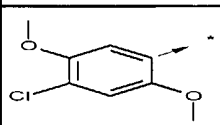
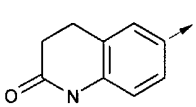
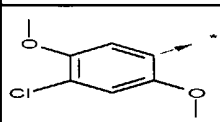
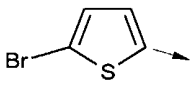
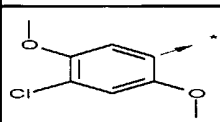
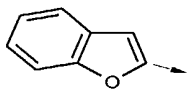


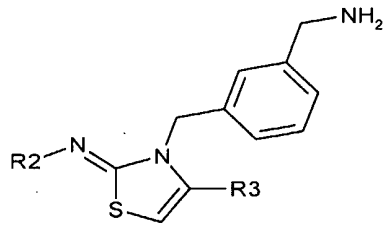
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
446			94	4,34	533,15
447			91,6	5,6	547,98
448			92,6	5,82	504,14
449			84,9	5,76	468,08
450			95,4	5,54	458,03
451			93,3	5,74	481,03
452			85,3	6,21	509,06
453			97,4	5,62	518,97
454			92	5,91	602,90
455			91,4	5,54	498,06
456			91,4	4,98	509,06

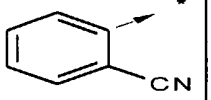
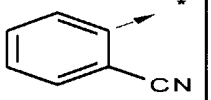
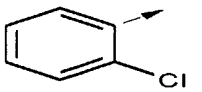
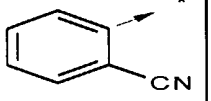
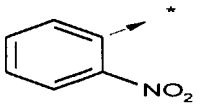
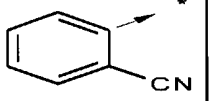
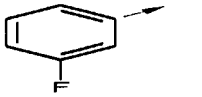
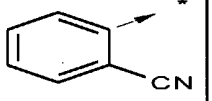
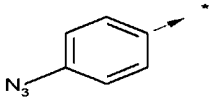
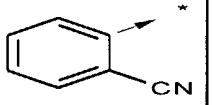
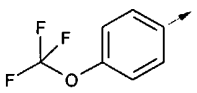
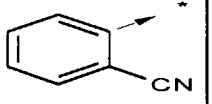
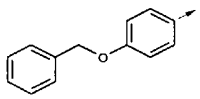
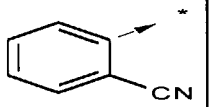
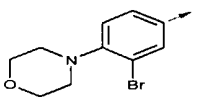
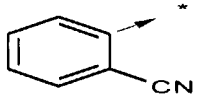
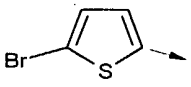
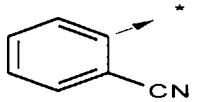
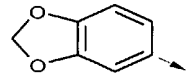
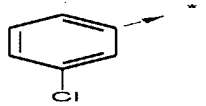


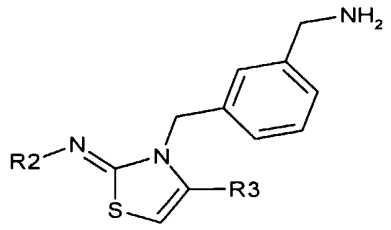
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
457			88,7	5,9	523,88
458			88,5	5,88	480,05
459			88,2	4,69	506,18
460			93,1	4,87	496,15
461			91,2	4,92	519,15
462			26,9	5,01	547,17
463			93,9	5,26	557,08
464			93,2	5,08	641,13
465			95,7	4,64	536,15
466			95,3	4,24	547,15
467			92,3	5,39	562,00

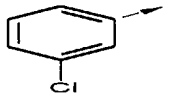
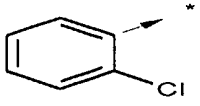
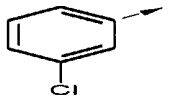
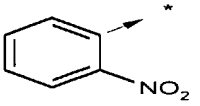
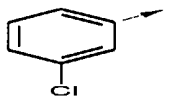
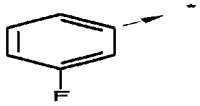
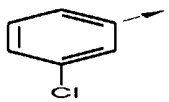
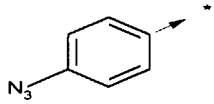
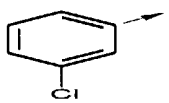
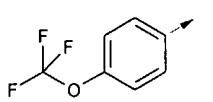
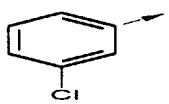
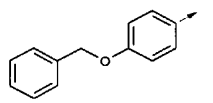
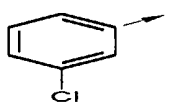
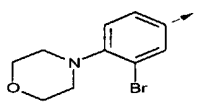
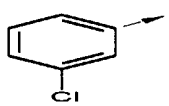
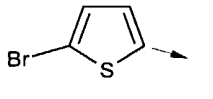
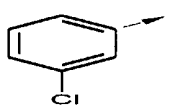
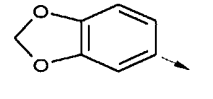
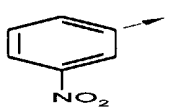
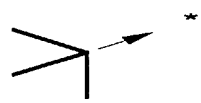
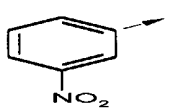
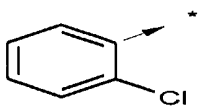


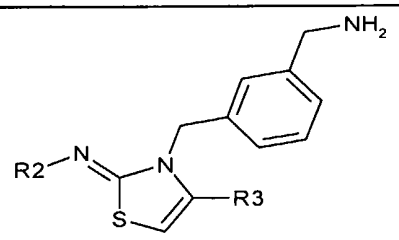
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
468			92	5,6	518,14
469			75,3	4,59	494,13
470			97,1	4,73	484,11
471			95,4	4,81	507,11
472			10,7	4,9	535,14
473			96,4	5,07	545,02
474			96,5	4,98	629,05
475			95,2	4,5	524,08
476			96	4,06	535,09
477			95,3	5,22	549,95
478			94,1	5,36	506,08

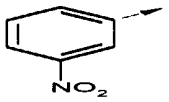
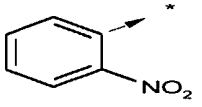
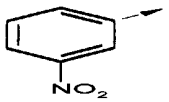
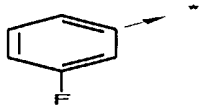
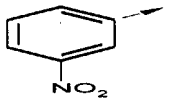
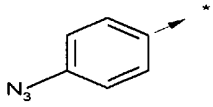
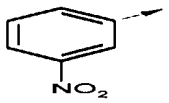
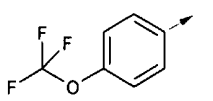
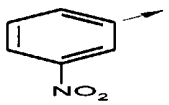
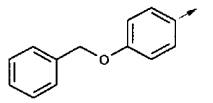
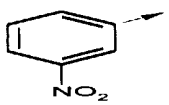
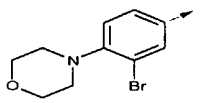
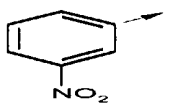
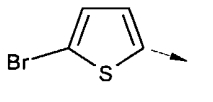
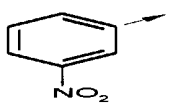
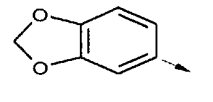
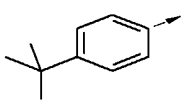
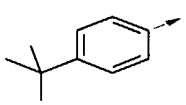
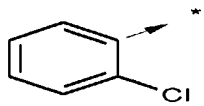
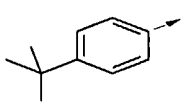
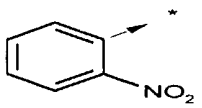


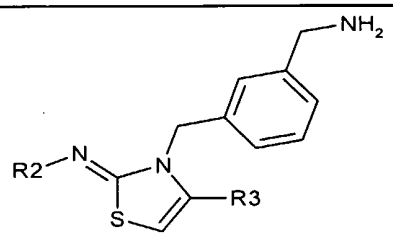
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
479			45,6	4,95	377,14
480			79	5,17	431,07
481			56,8	4,84	442,08
482			79,2	5,04	415,07
483			78,4	5,25	438,11
484			82,6	5,47	481,10
485			72,6	5,81	503,17
486			79	5,36	560,04
487			72,1	5,34	480,98
488			76,9	5.0	441,09
489			94,5	4,6	386,09

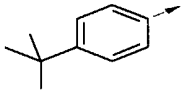
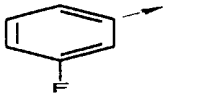
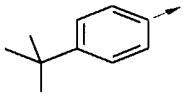
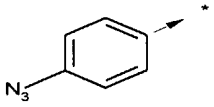
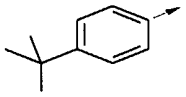
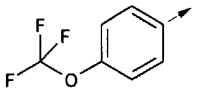
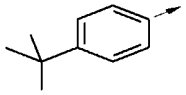
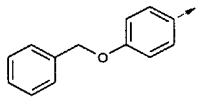
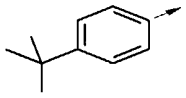
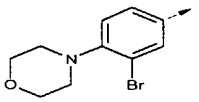
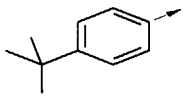
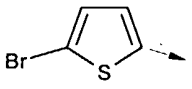
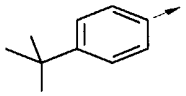
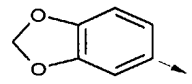
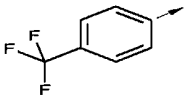
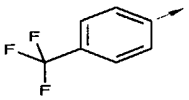
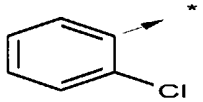
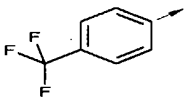
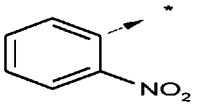
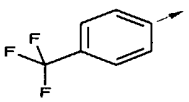
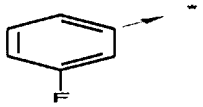


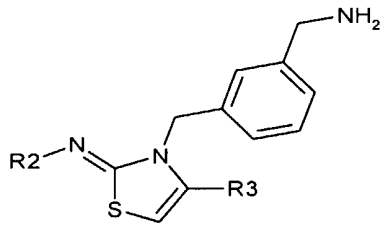
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
490			95,4	5,34	440,04
491			95,3	5,05	451,06
492			95,2	5,23	424,07
493			93,4	5,35	447,07
494			96,1	5,67	490,07
495			88,5	5,84	512,12
496			92,9	5,55	569,00
497			92,8	5,64	489,95
498			92	5,03	450,08
499			96,5	4,87	397,11
500			96,1	5,26	451,06

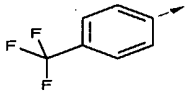
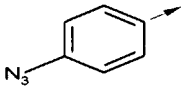
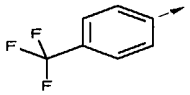
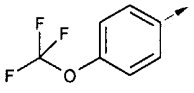
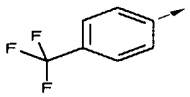
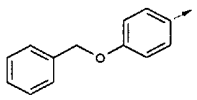
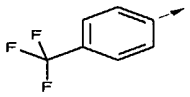
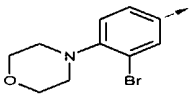
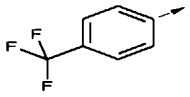
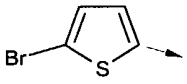
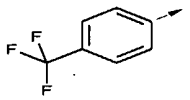
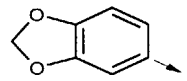
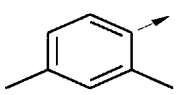
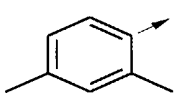
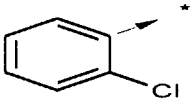
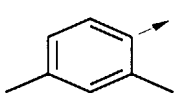
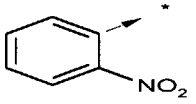
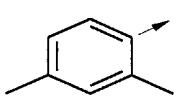
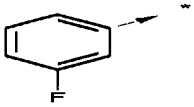
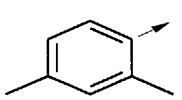
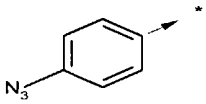


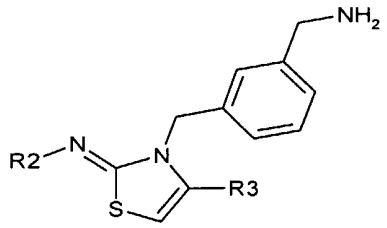
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
501			96,1	4,95	462,07
502			96,3	5,15	435,08
503			96,2	5,31	458,11
504			96,5	5,57	501,08
505			89,3	5,86	523,15
506			95,8	5,46	580,03
507			94,2	5,45	500,96
508			93,5	5,07	461,08
509			98,5	4,29	408,18
510			97,2	4,98	462,13
511			96,4	4,81	473,19

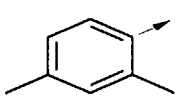
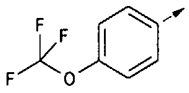
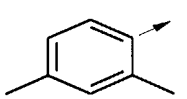
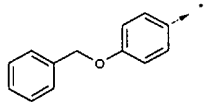
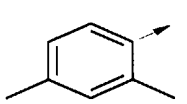
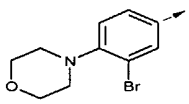
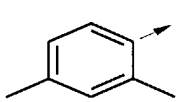
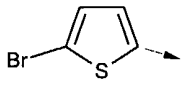
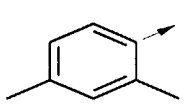
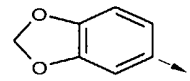
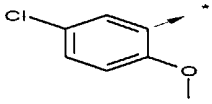
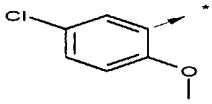
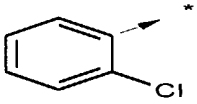
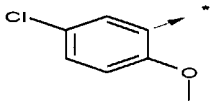
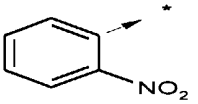
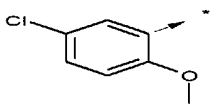
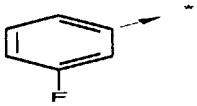
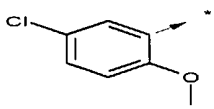
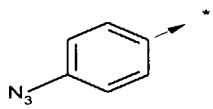
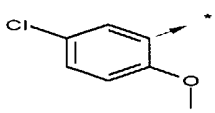
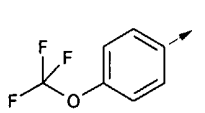


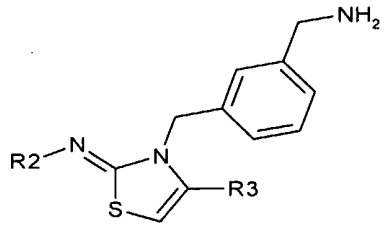
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
512			96,3	4,9	446,17
513			94,7	4,93	469,19
514			96,9	5,29	512,17
515			90,6	5,33	534,20
516			96,3	5,15	591,13
517			93,5	5,47	512,04
518			95	4,65	472,19
519			95,5	5,14	420,13
520			95,6	5,63	474,07
521			93,8	5,35	485,10
522			95,1	5,53	458,09

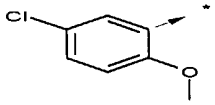
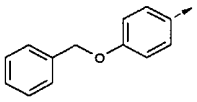
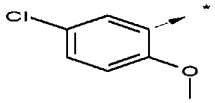
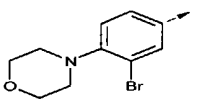
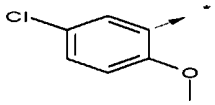
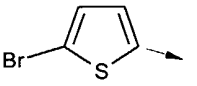
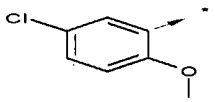
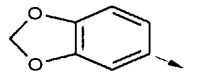
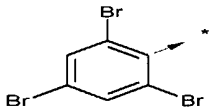
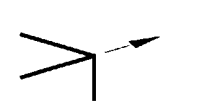
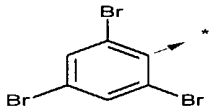
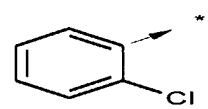
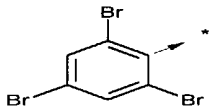
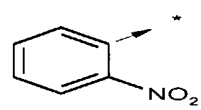
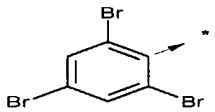
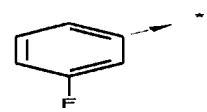
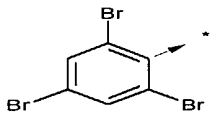
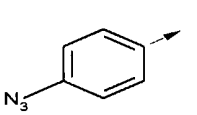
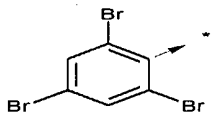
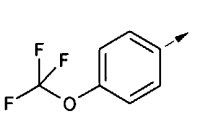
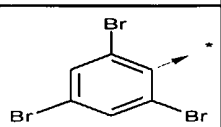
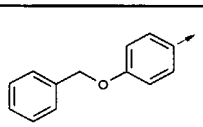


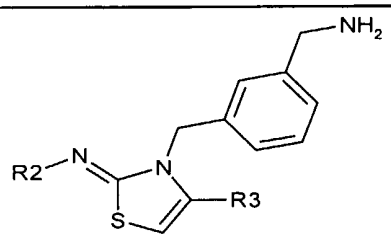
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
523			94,2	5,67	481,10
524			94,6	5,9	524,09
525			88,4	6,15	546,11
526			92,6	5,83	603,07
527			89,8	5,87	523,97
528			92,3	5,41	484,11
529			98,2	3,75	380,18
530			96,4	4,35	434,11
531			96,5	4,19	445,13
532			95,7	4,25	418,14
533			94,4	4,33	441,13

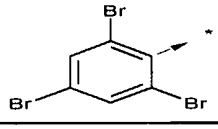
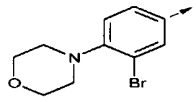
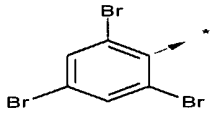
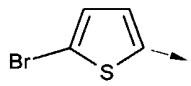
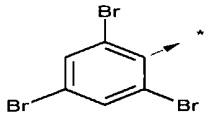
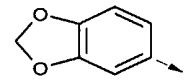


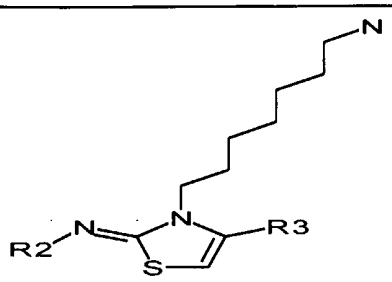
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
534			95,5	4,69	484,14
535			89,5	4,81	506,18
536			95,5	4,54	563,08
537			92,2	4,79	484,03
538			93,7	4,07	444,14
539			95,4	4,25	416,10
540			95,7	5,05	470,07
541			95,6	4,81	481,05
542			95,4	4,96	454,07
543			94,4	5,05	477,10
544			95,9	5,4	520,04

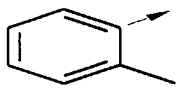
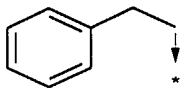
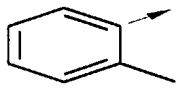
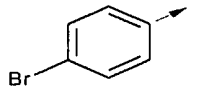
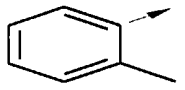
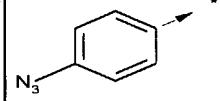
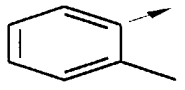
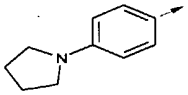
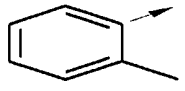
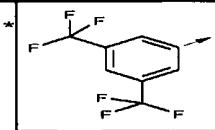
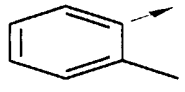
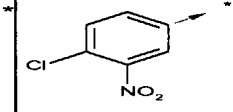
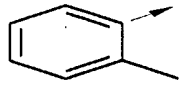
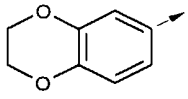
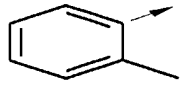
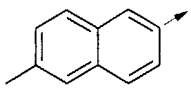
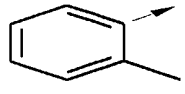
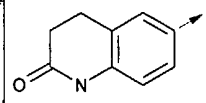
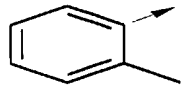
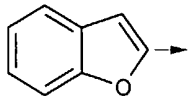
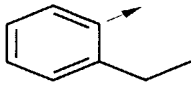
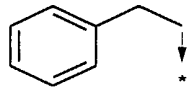


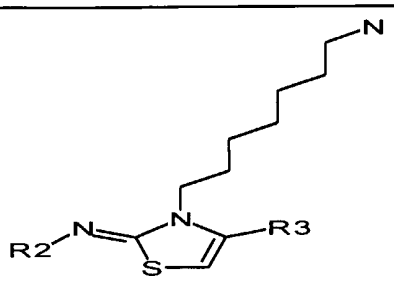
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
545			89,5	5,51	542,11
546			94	5,26	599,02
547			92,9	5,4	519,93
548			92,3	4,72	480,08
549			92	6,01	585,84
550			96,7	6,18	639,79
551			95,8	5,84	650,83
552			96	6,04	623,81
553			94,7	6,22	646,85
554			95	6,39	689,82
555			88,8	6,7	711,88

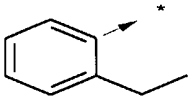
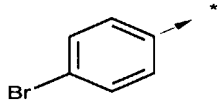
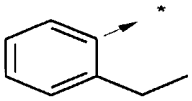
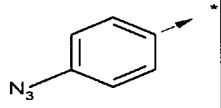
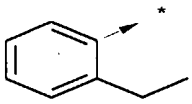
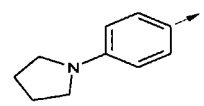
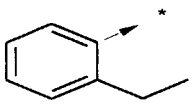
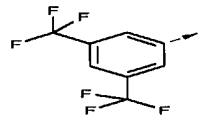
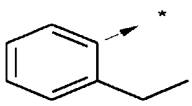
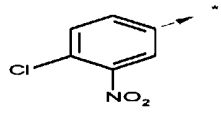
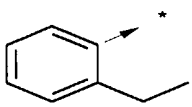
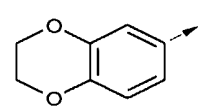
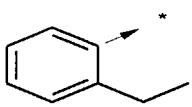
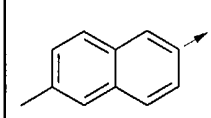
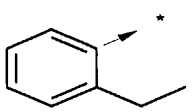
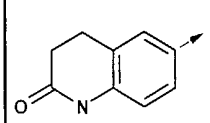
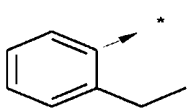
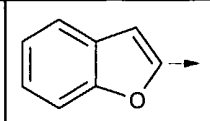
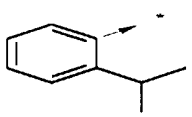
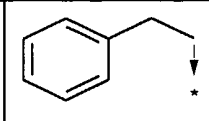
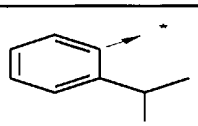
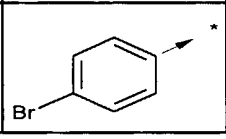


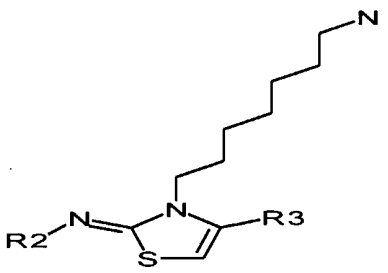
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
556			94,9	6,4	768,76
557			95	6,35	689,71
558			93,7	6,01	649,83

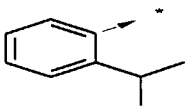
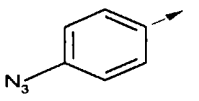
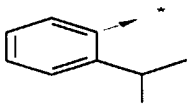
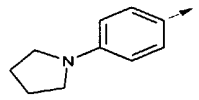
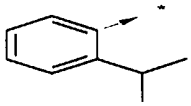
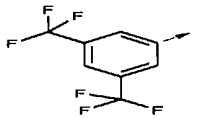
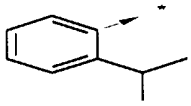
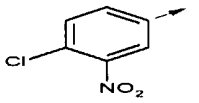
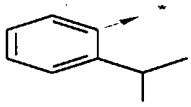
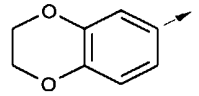
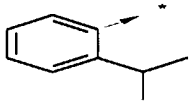
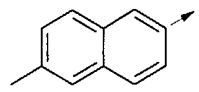
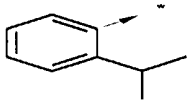
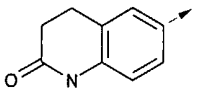
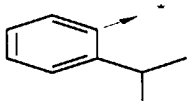
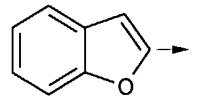
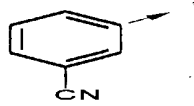
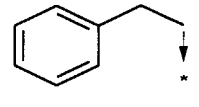
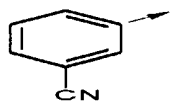
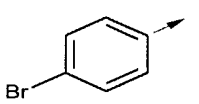
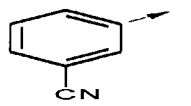
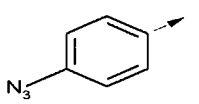


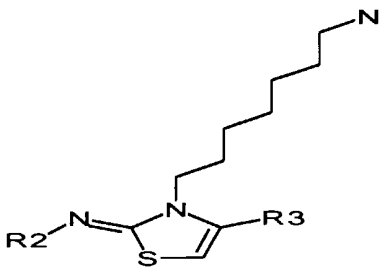
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
559			87,5	4,07	408,18
560			89,6	4,15	458,09
561			89,5	4,04	421,17
562			54,6	4,37	449,23
563			92,7	4,85	516,14
564			92,5	4,27	459,14
565			94,2	3,87	438,18
566			92,6	4,41	444,2
567			92,2	3,5	449,21
568			92,4	4,53	420,17
569			86,7	4,23	422,21

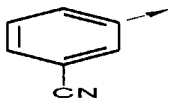
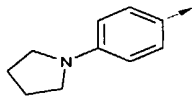
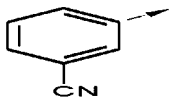
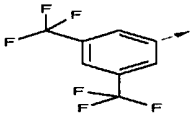
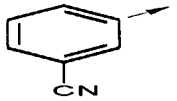
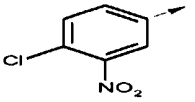
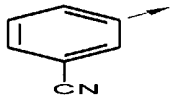
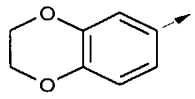
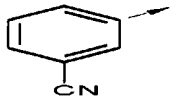
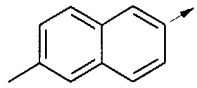
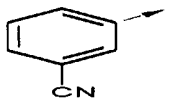
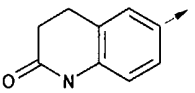
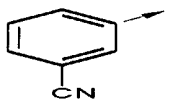
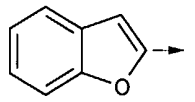
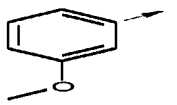
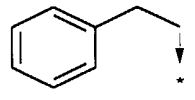
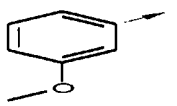
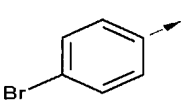
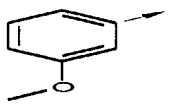
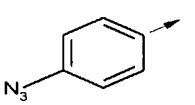
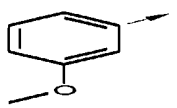
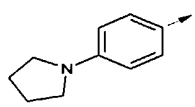


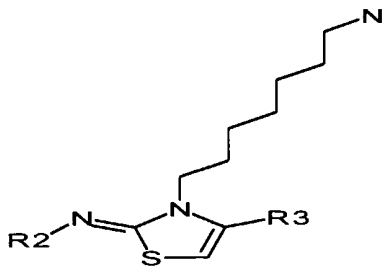
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
570			93,7	4,38	472,12
571			88,7	4,27	435,19
572			64,2	4,53	463,25
573			93,8	5,15	530,18
574			93,6	4,55	473,17
575			86,8	4,07	452,21
576			93,4	4,65	458,24
577			91,8	3,71	463,23
578			91,6	4,85	434,20
579			83,1	4,38	436,23
580			92,7	4,56	486,14

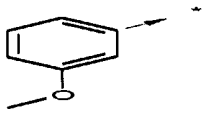
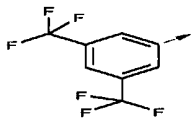
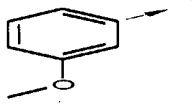
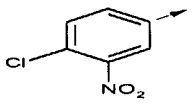
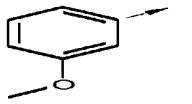
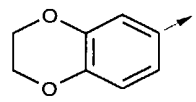
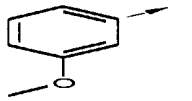
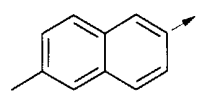
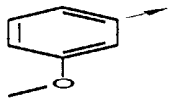
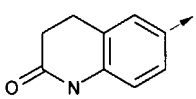
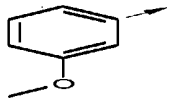
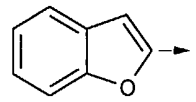
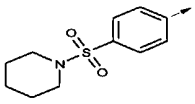
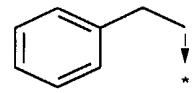
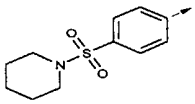
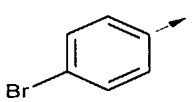
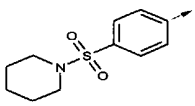
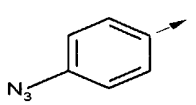
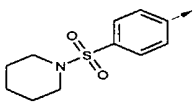
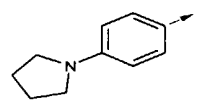
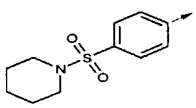
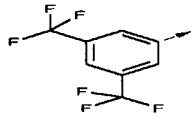


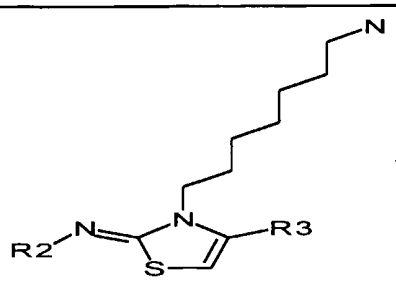
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
581			88,9	4,43	449,24
582			80,4	4,65	477,25
583			93	5,34	544,19
584			94,3	4,75	487,20
585			93,2	4,23	466,23
586			94	4,82	472,28
587			92,1	3,88	477,28
588			91,7	5,06	448,23
589			83,1	4,62	419,20
590			93	5,06	469,09
591			88	4,89	432,18

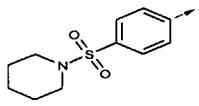
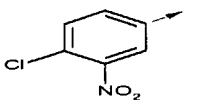
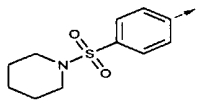
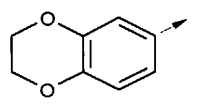
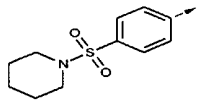
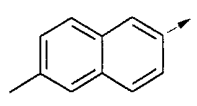
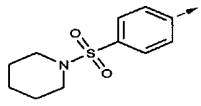
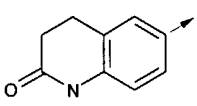
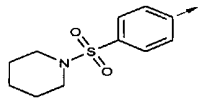
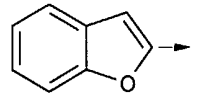
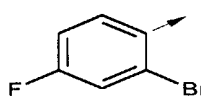
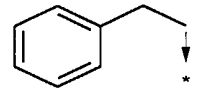
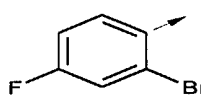
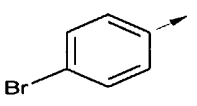
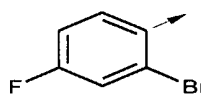
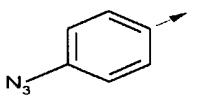
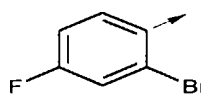
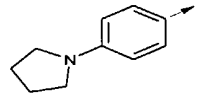
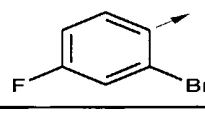
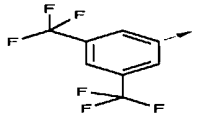
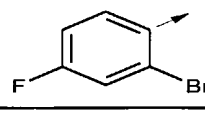
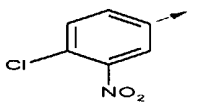


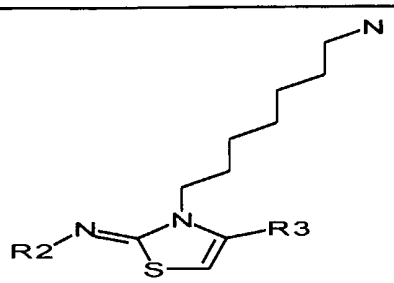
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
592			88,5	5,02	460,23
593			93,2	5,69	527,16
594			91,6	5,11	470,15
595			90,2	4,53	449,19
596			91,9	5,4	455,19
597			90,2	3,99	460,20
598			93	5,41	431,16
599			86,1	4,05	424,22
600			91,8	4,17	474,12
601			90,2	4,04	437,19
602			86,4	4,34	465,24

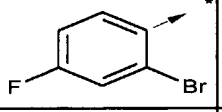
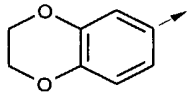
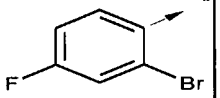
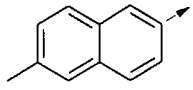
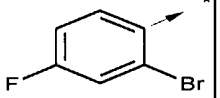
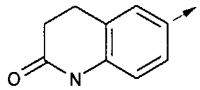
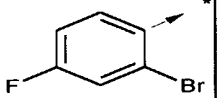
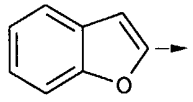
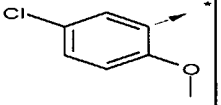
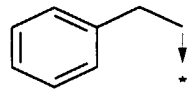
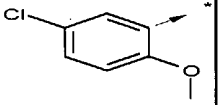
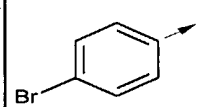
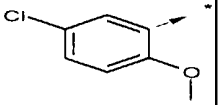
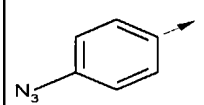
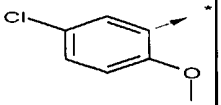
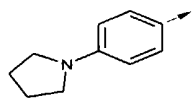
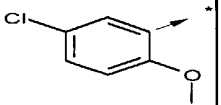
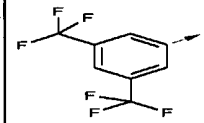
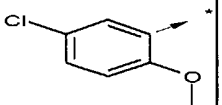
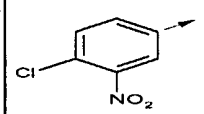
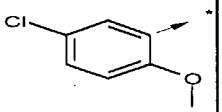
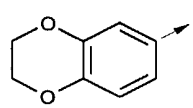


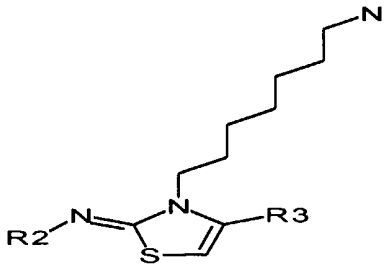
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
603			93,5	4,91	532,19
604			93,4	4,3	475,16
605			87,9	3,86	454,20
606			91,8	4,47	460,25
607			90,7	3,48	465,21
608			92	4,55	436,19
609			85,9	5,19	541,25
610			92,4	5,6	591,13
611			89,7	5,45	554,23
612			88,7	5,58	582,28
613			93,2	6,06	649,24

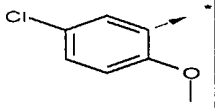
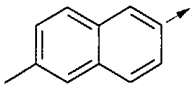
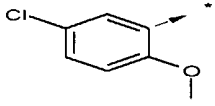
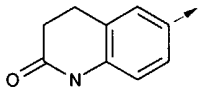
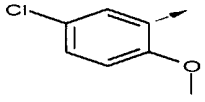
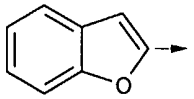


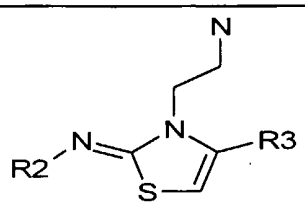
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
614			94,1	5,55	592,18
615			90	5,09	571,23
616			93,3	5,91	577,26
617			91,4	4,53	582,24
618			92,1	5,84	553,22
619			76,6	5,06	490,15
620			91,2	5,56	539,99
621			86,7	5,39	503,12
622			81	5,47	531,15
623			92,2	6,13	598,06
624			84,8	5,59	541,03

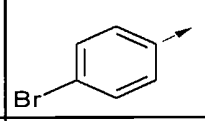
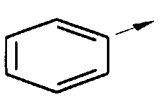
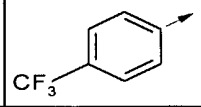
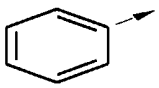
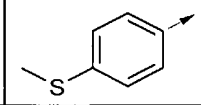
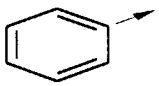
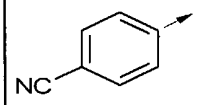
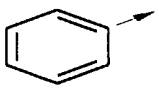
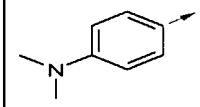
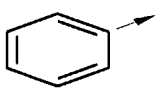
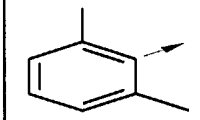
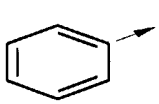
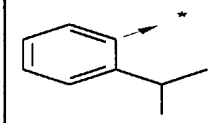
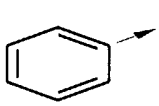
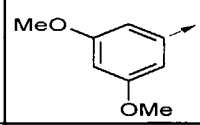
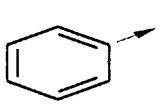
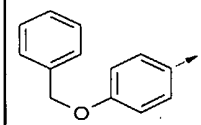
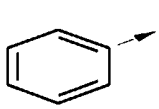
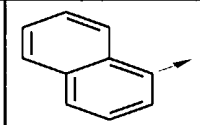
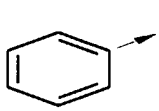
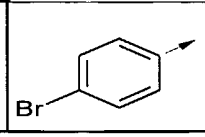
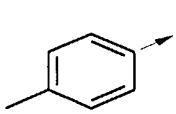


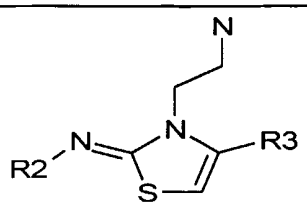
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
625			88	5,04	520,11
626			91,6	5,91	526,14
627			89,4	4,49	531,11
628			90,3	5,89	502,10
629			83,3	4,41	458,20
630			91,5	4,72	508,08
631			87,8	4,57	471,18
632			57,7	4,71	499,23
633			92,8	5,54	566,12
634			93,5	4,93	509,13
635			89,3	4,29	488,19

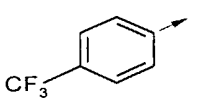
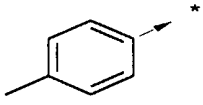
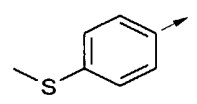
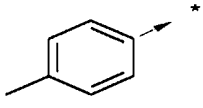
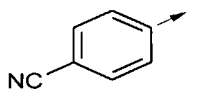
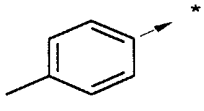
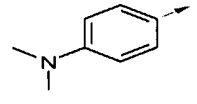
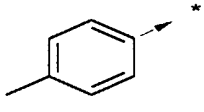
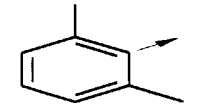
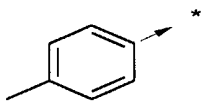
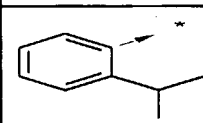
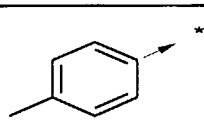
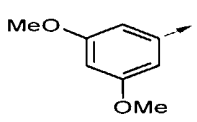
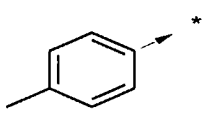
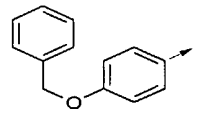
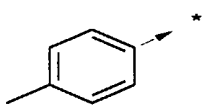
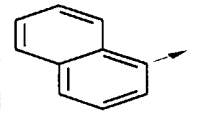
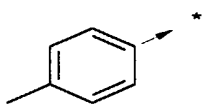
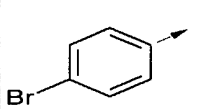
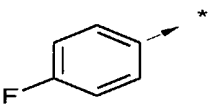
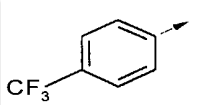
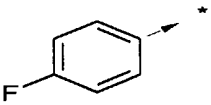


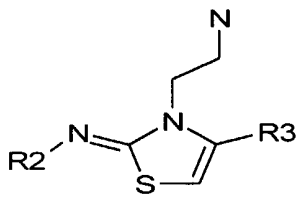
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
636			93,6	4,99	494,21
637			91,7	3,88	499,21
638			91,9	5,22	470,18

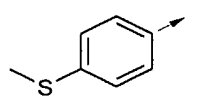
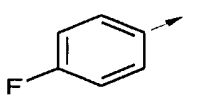
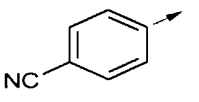
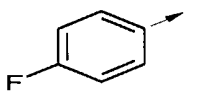
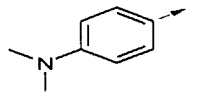
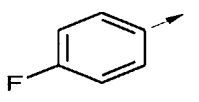
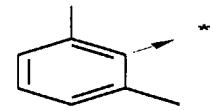
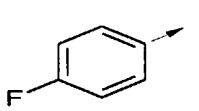
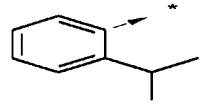
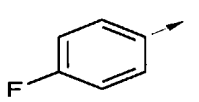
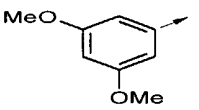
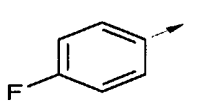
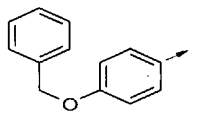
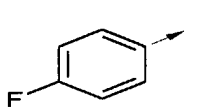
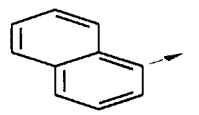
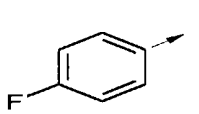
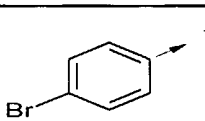
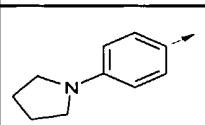
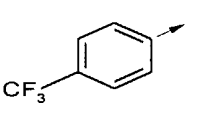
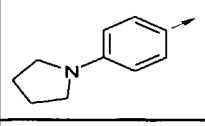
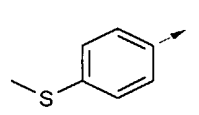
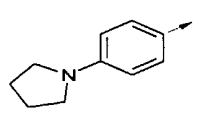


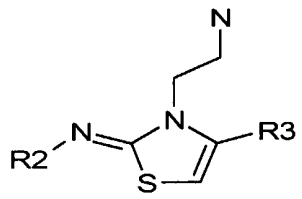
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
639			95	7,28	374,10
640			87	7,62	364,24
641			84	6,75	342,23
642			79	6,6	321,24
643			81	4,96	339,29
644			82	6,44	324,28
645			83	7,16	338,30
646			59	6,6	356,25
647			86	7,28	402,23
648			84	7,29	346,26
649			85	7,66	388,1

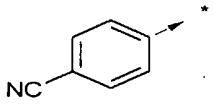
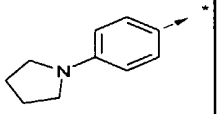
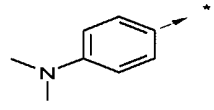
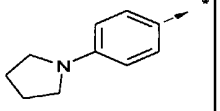
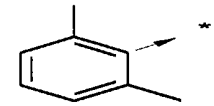
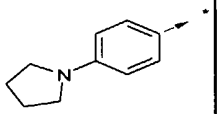
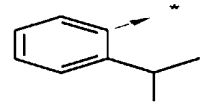
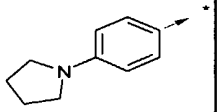
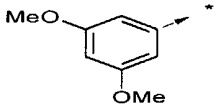
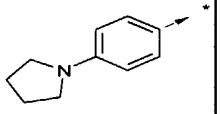
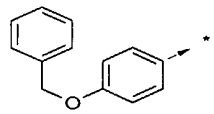
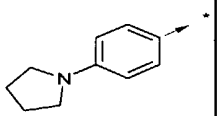
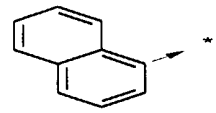
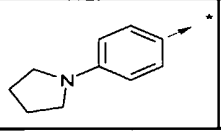


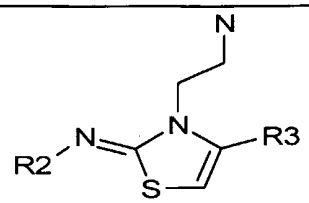
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
650			84	7,96	378,21
651			85	7,14	356,23
652			73	7,02	335,26
653			76	5,37	353,29
654			83	6,84	338,30
655			81	7,51	352,29
656			75	6,99	370,27
657			77	7,6	416,26
658			80	7,65	360,25
659			87	7,37	392,10
660			71	7,7	382,16

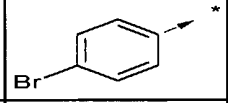
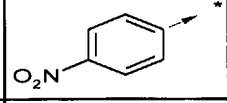
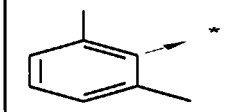
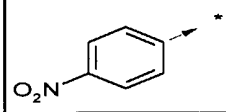
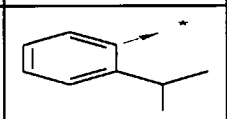
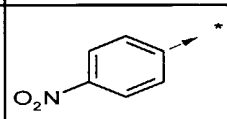
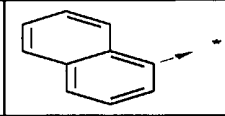
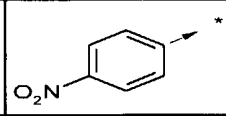
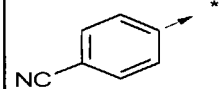
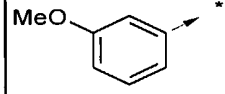
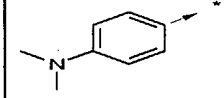
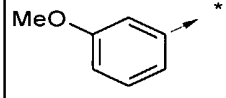
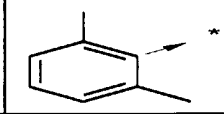
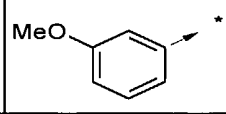
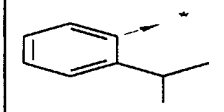
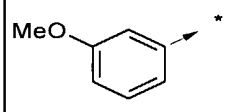
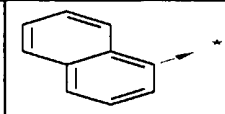
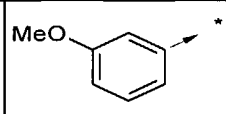
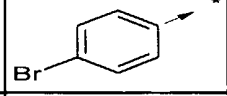
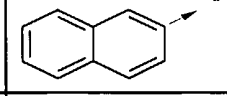
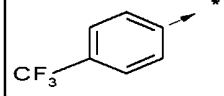
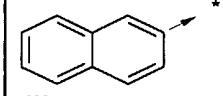
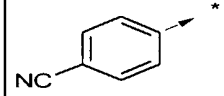
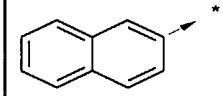
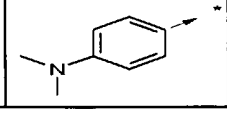
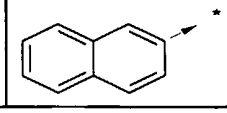


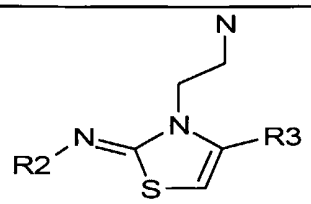
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
661			63	6,9	360,21
662			59	6,7	339,23
663			80	5,06	357,26
664			63	6,61	342,26
665			82	7,28	356,25
666			39	6,74	374,22
667			85	7,42	420,24
668			81	7,39	364,26
669			93	8,28	443,2
670			88	8,61	433,2
671			88	7,7	411,2

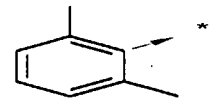
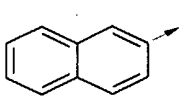
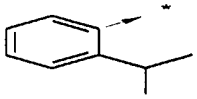
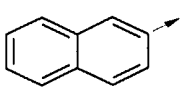
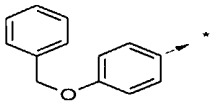
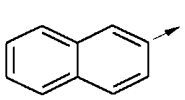
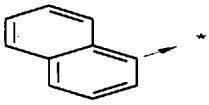
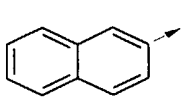
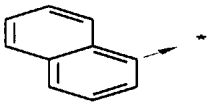
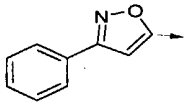


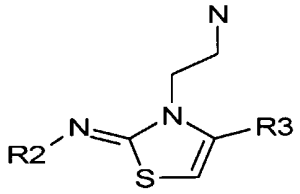
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
672			80	7,76	390,26
673			85	6,08	408,3
674			89	7,36	393,3
675			84	8,03	407,3
676			81	7,59	425,3
677			83	8,03	471,3
678			91	8,24	415,2

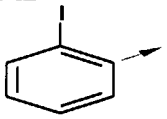
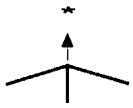
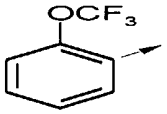
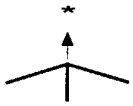
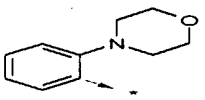
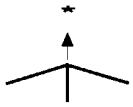
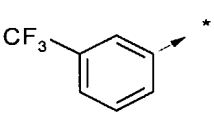
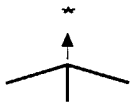
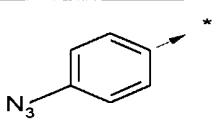
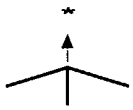
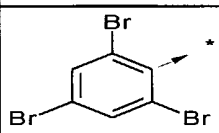
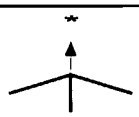
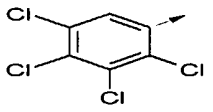
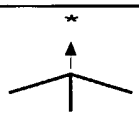
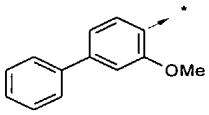
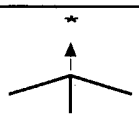
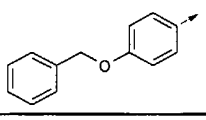
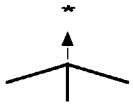
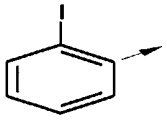
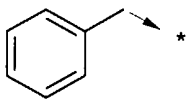
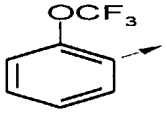
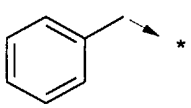


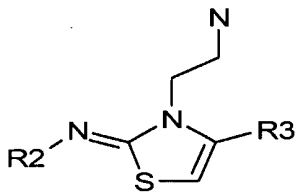
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
679			78	7,41	419,09
680			75	6,98	369,23
681			81	7,51	383,23
682			85	7,46	391,20
683			74	6,79	351,21
684			81	5,18	369,26
685			76	6,73	354,26
686			87	7,39	368,27
687			80	7,48	376,22
688			83	8,14	424,11
689			83	8,37	414,14
690			78	7,48	371,21
691			85	5,88	389,24

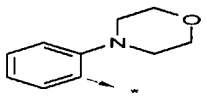
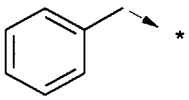
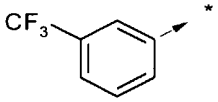
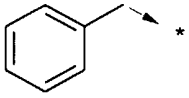
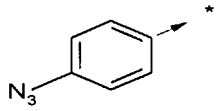
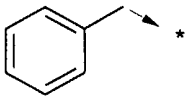
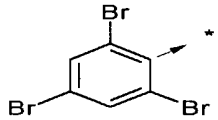
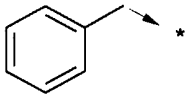
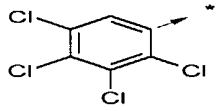
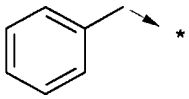
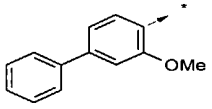
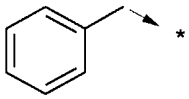
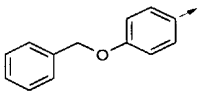
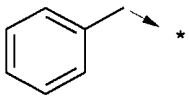
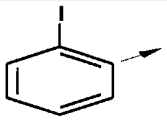
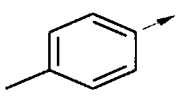
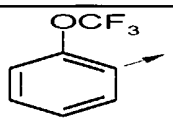
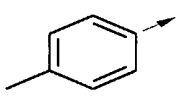
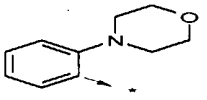
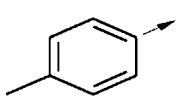
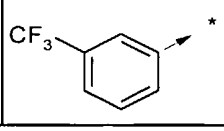
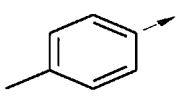


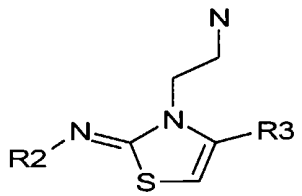
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
692			79	7,53	374,24
693			83	8,1	388,23
694			77	8,18	452,23
695			81	8,14	396,20
696			76	7,94	413,16

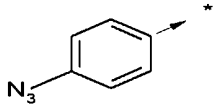
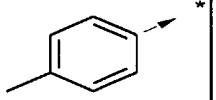
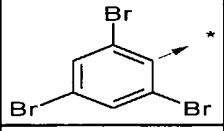
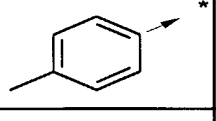
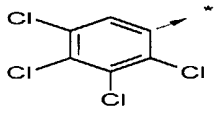
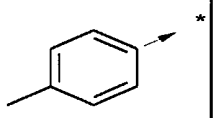
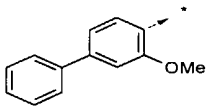
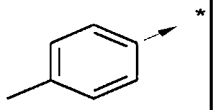
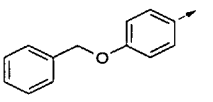
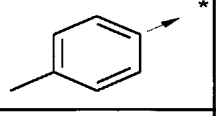
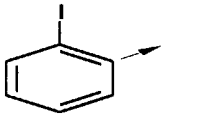
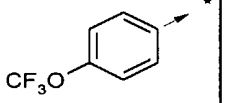
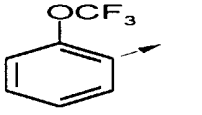
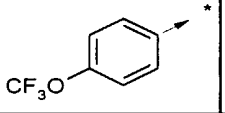
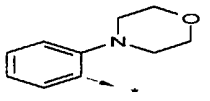
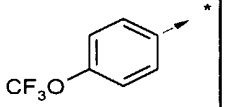
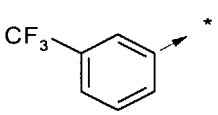
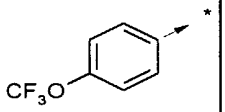
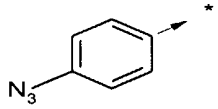
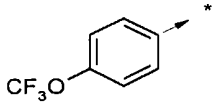
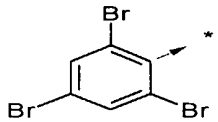
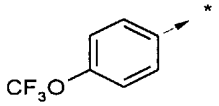


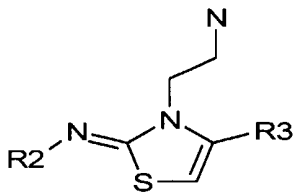
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
697			86	7,41	402,01
698			93	7,57	360,16
699			74	6,32	361,23
700			88	7,75	344,19
701			83	6,88	317,22
702			93	8,33	509,9
703			90	8,69	411,99
704			72	8,16	382,21
705			81	7,27	382,2
706			82	7,7	436,05
707			91	7,85	394,16

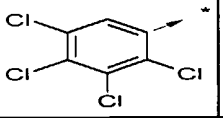
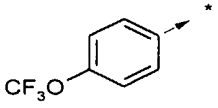
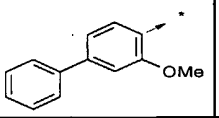
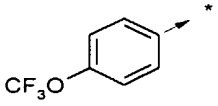
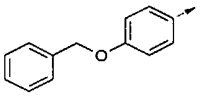
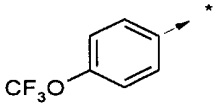
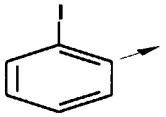
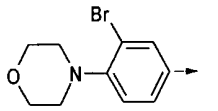
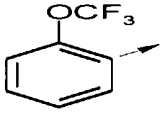
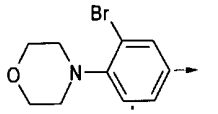
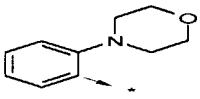
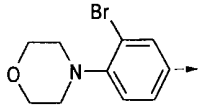
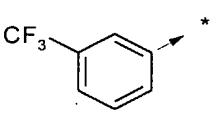
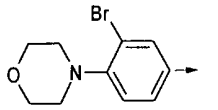
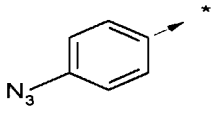
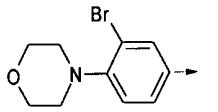
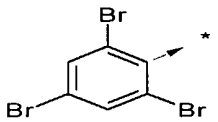
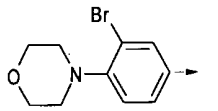
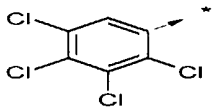
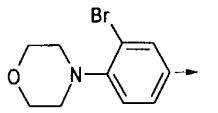
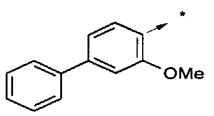
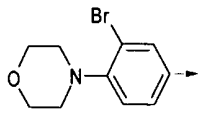


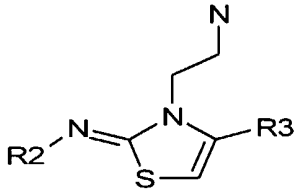
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
708			80	6,59	395,19
709			87	7,99	378,16
710			83	7,3	351,2
711			89	8,58	543,85
712			89	8,9	446,01
713			72	8,35	416,19
714			82	7,62	416,19
715			85	7,84	436,05
716			88	7,97	394,14
717			75	6,82	395,21
718			88	8,13	378,13

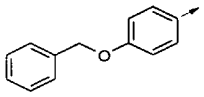
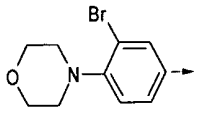
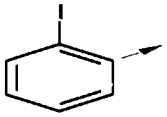
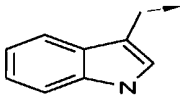
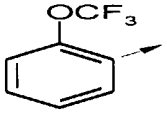
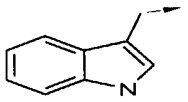
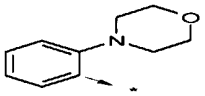
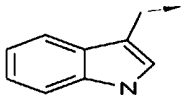
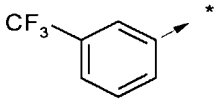
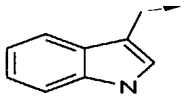
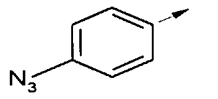
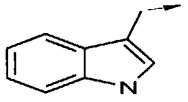
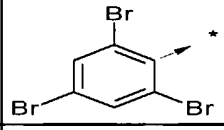
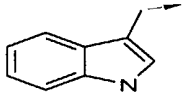
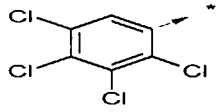
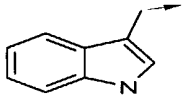
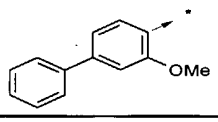
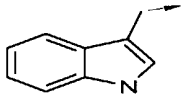
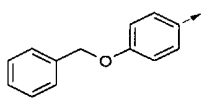
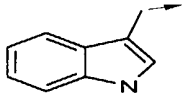
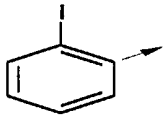
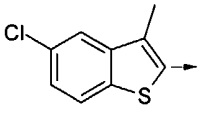


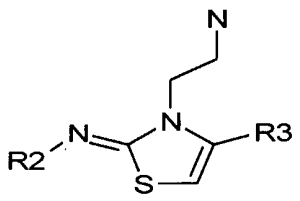
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
719			78	7,5	351,2
720			91	8,65	543,86
721			89	8,97	446.0
722			75	8,55	416,19
723			83	7,84	416,19
724			90	8,24	506,01
725			88	8,37	464,1
726			76	7,43	465,17
727			86	8,52	448,1
728			84	8,11	421,11
729			89	8,97	613,8

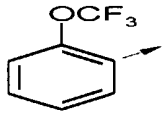
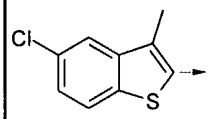
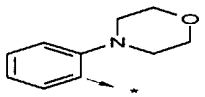
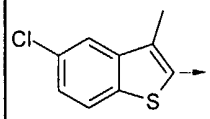
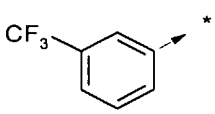
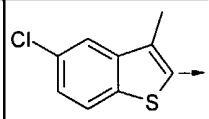
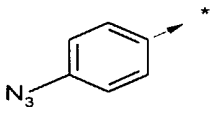
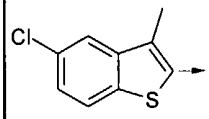
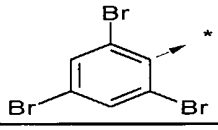
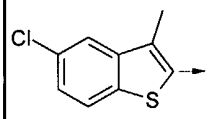
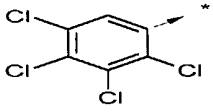
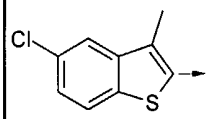
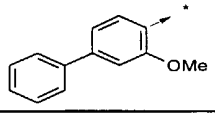
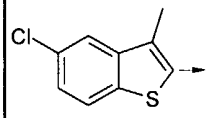
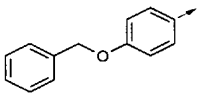
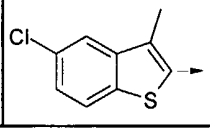


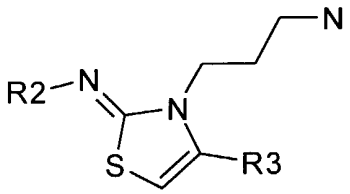
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
730			90	9,24	515,94
731			74	8,94	486,17
732			81	8,51	486,16
733			82	8,15	584,93
734			81	8,26	543,05
735			69	7,31	544,1
736			80	8,43	527,07
737			82	7,99	500,1
738			88	8,92	692,79
739			85	9,23	594,87
740			71	8,84	565,1

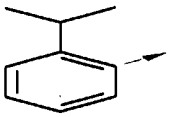
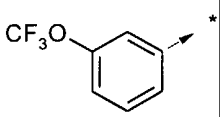
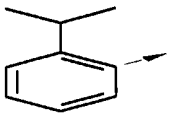
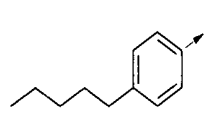
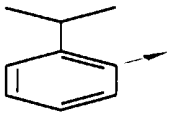
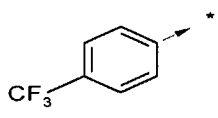
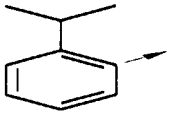
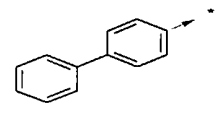
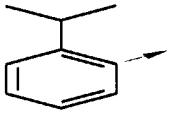
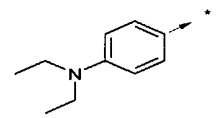
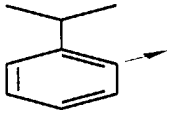
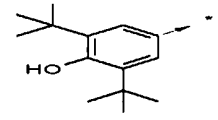
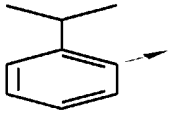
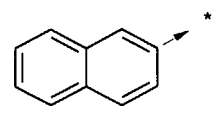
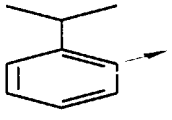
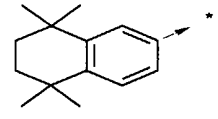
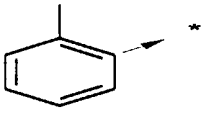
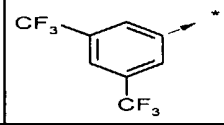
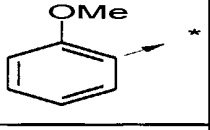
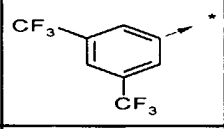
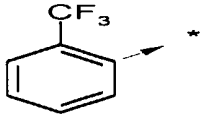
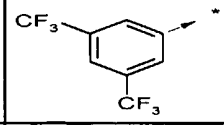
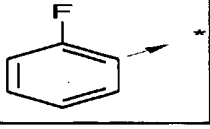
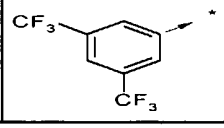


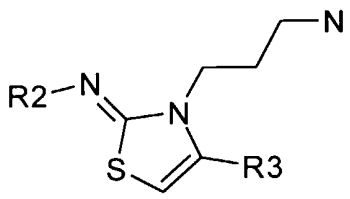
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
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742			82	7,77	475,06
743			81	7,91	433,13
744			86	6,72	434,21
745			82	8,03	417,15
746			74	7,32	390,17
747			86	8,61	582,85
748			76	8,94	485,01
749			73	8,33	455,19
750			84	7,59	455,2
751			67	8,82	525,96

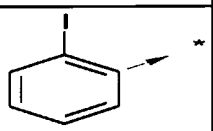
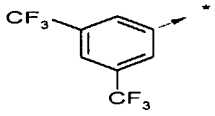
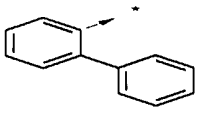
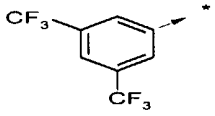
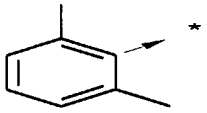
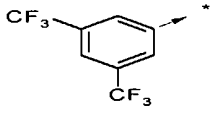
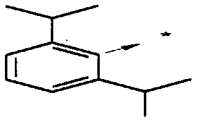
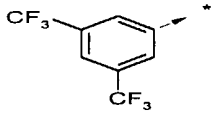
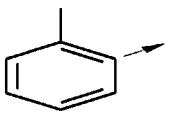
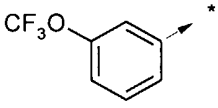
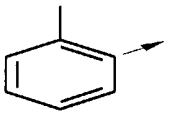
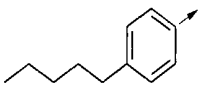
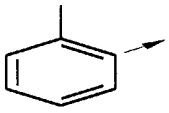
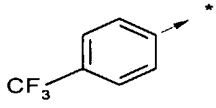
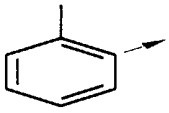
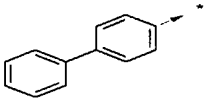
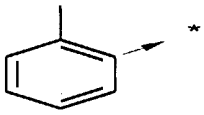
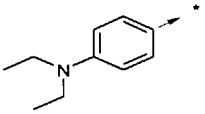
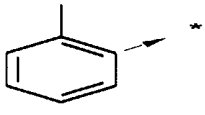
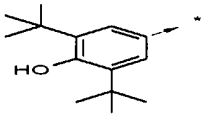
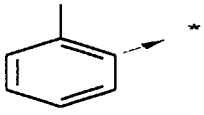
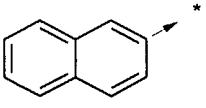
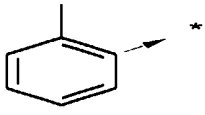
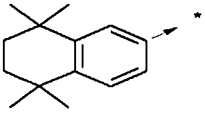


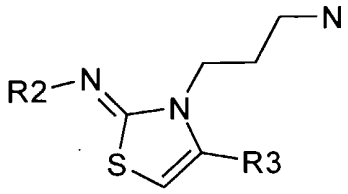
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
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753			68	8,08	485,14
754			75	9,08	468,06
755			78	8,77	441,06
756			81	9,56	633,79
757			81	9,77	535,91
758			70	9,55	506,12
759			78	9,21	506,13

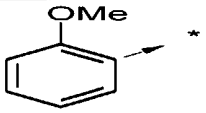
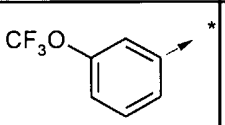
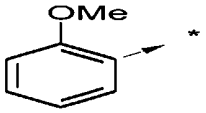
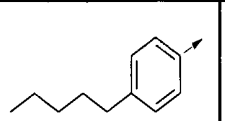
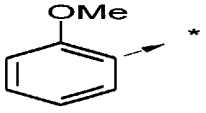
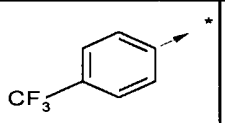
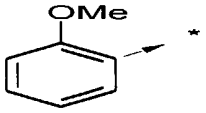
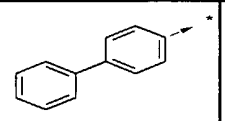
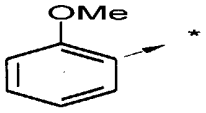
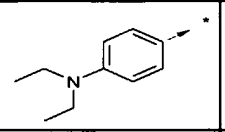
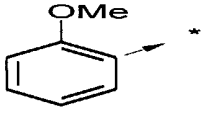
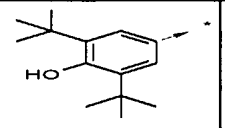
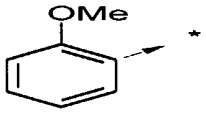
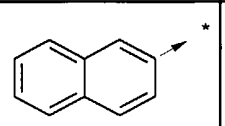
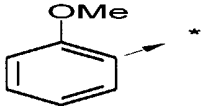
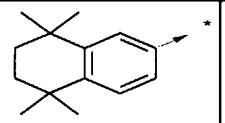
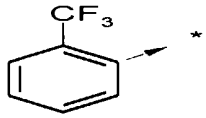
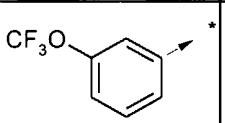
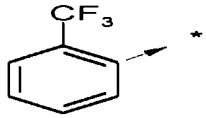
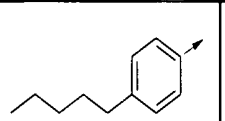
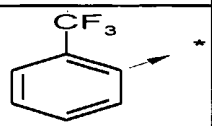
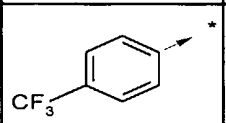
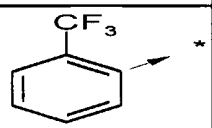
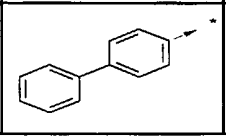


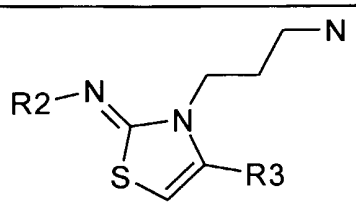
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
760			92,9	5,03	436,23
761			90,4	5,56	422,33
762			94,36	4,94	420,26
763			88,08	5,09	428,30
764			77,6	4,42	423,34
765			92,4	5,52	480,38
766			84,6	4,8	402,25
767			89,8	5,79	462,37
768			91,9	5,12	460,20
769			91,4	5,14	476,21
770			94,2	5,67	514,18
771			93.0	5,37	464,18

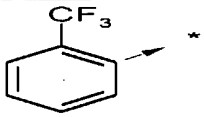
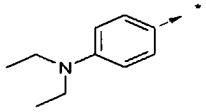
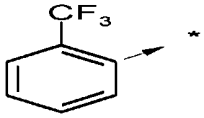
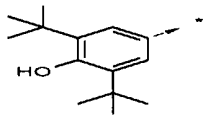
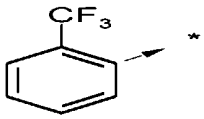
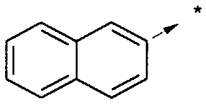
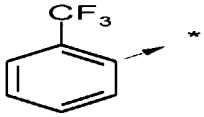
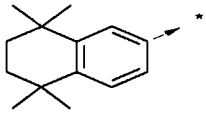
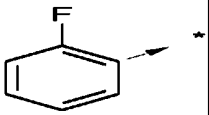
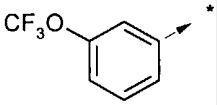
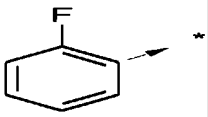
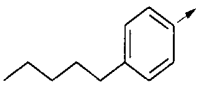
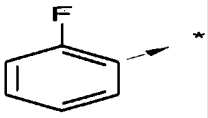
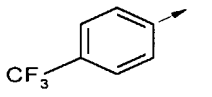
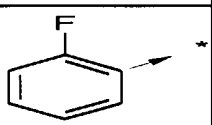
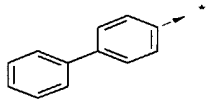
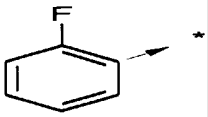
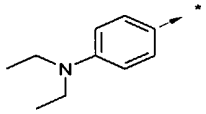
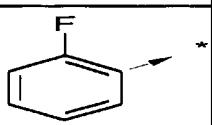
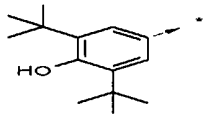
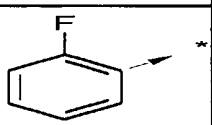
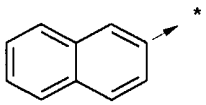
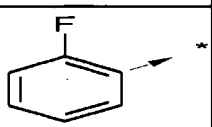
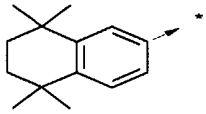


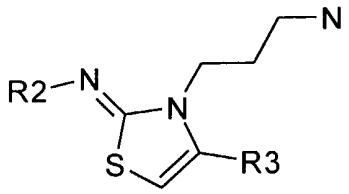
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
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773			87,9	5,76	522,21
774			91,2	5,12	474,23
775			78,1	5,82	530,27
776			88,8	4,55	408,22
777			90,7	5,13	394,34
778			92,6	4,45	392,23
779			88,8	4,65	400,30
780			76,5	3,94	395,33
781			90,8	5,11	452,38
782			87,7	4,33	374,29
783			91,5	5,35	434,38

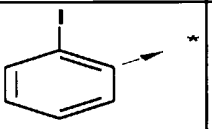
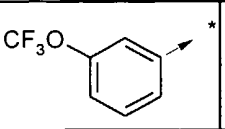
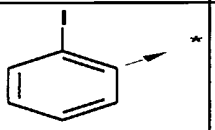
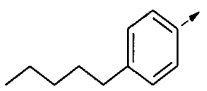
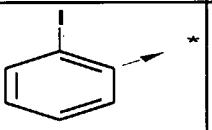
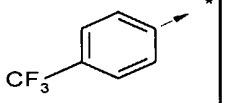
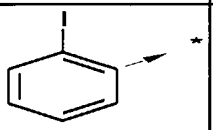
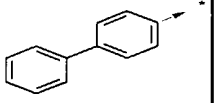
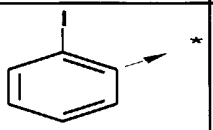
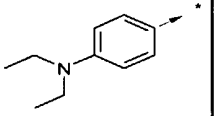
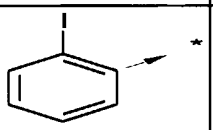
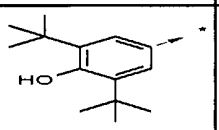
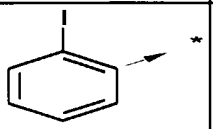
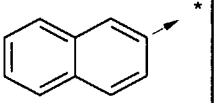
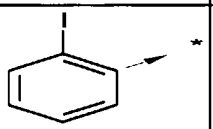
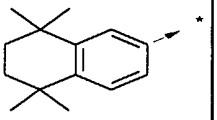
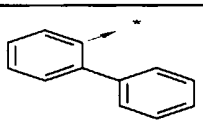
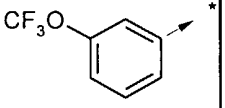
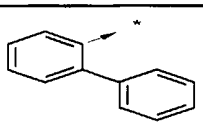
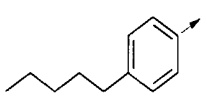
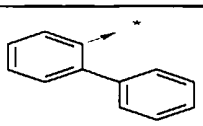
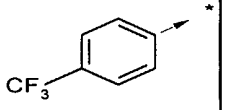
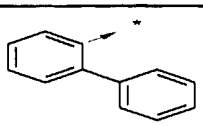
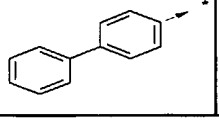


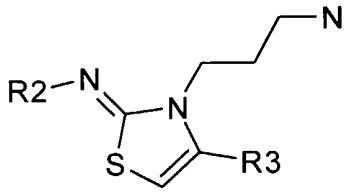
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
784			92,1	4,61	424,25
785			89,3	5,28	410,33
786			95	4,49	408,22
787			82,4	4,74	416,27
788			73,8	3,95	411,30
789			92,9	5,27	468,36
790			84,9	4,39	390,28
791			91,5	5,53	450,37
792			90	5,5	462,19
793			93,9	6,25	448,31
794			94,9	5,41	446,22
795			93,5	5,76	454,26

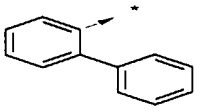
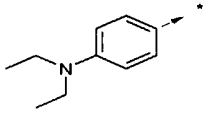
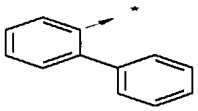
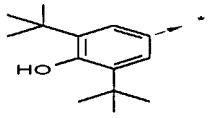
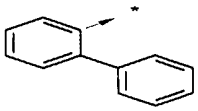
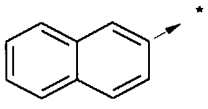
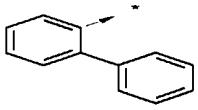
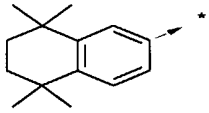
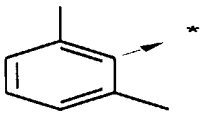
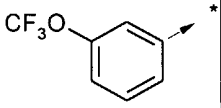
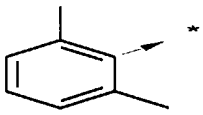
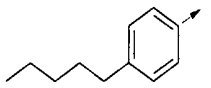
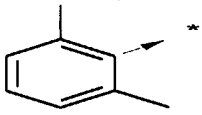
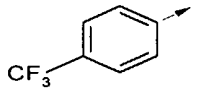
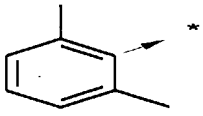
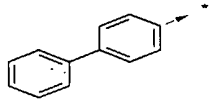
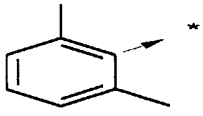
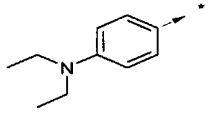
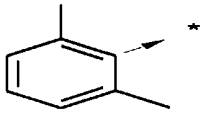
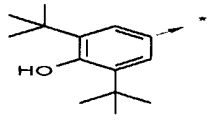
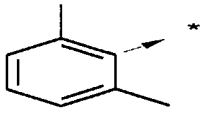
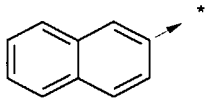
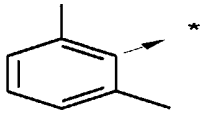
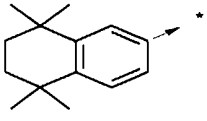


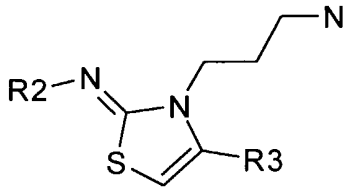
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
796			89,8	4,95	449,30
797			92,4	6,22	506,34
798			93	5,52	428,245
799			92,8	6,39	488,34
800			87,6	5,11	412,20
801			92,5	5,9	398,30
802			93,5	5	396,20
803			92,2	5,35	404,26
804			90,7	4,41	399,28
805			94,2	5,87	456,34
806			89,3	5,05	378,23
807			90,9	6,07	438,33

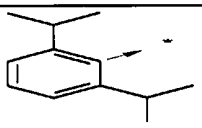
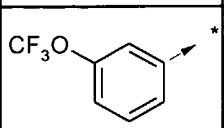
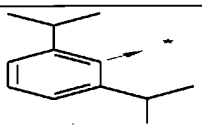
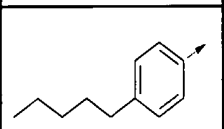
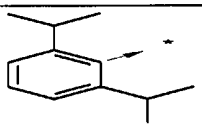
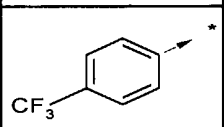
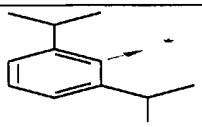
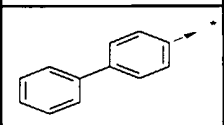
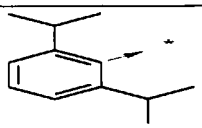
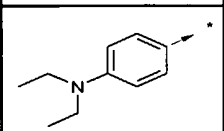
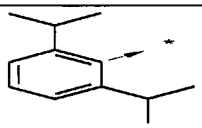
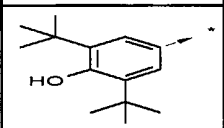
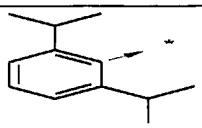
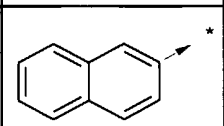
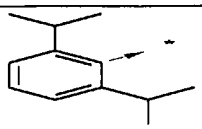
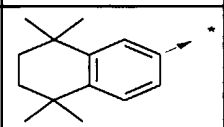


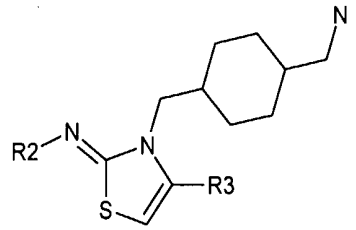
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
808			88,8	5,43	520,09
809			94	6,19	506,19
810			95,9	5,33	504,12
811			92,9	5,68	512,15
812			88,9	4,8	507,18
813			92,3	6,17	564,20
814			93,9	5,41	486,14
815			93,5	6,35	546,18
816			91,9	5,41	470,25
817			93	5,98	456,34
818			91,4	5,29	454,24
819			90,4	5,49	462,29

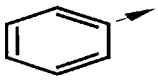
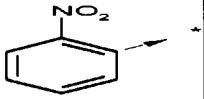
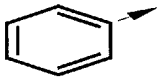
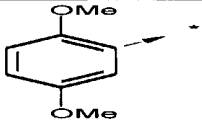
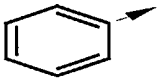
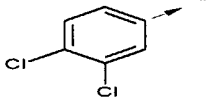
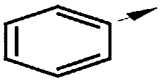
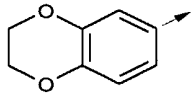
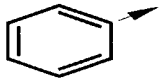
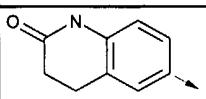
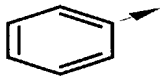
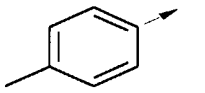
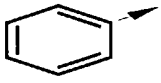
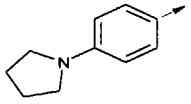
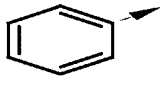
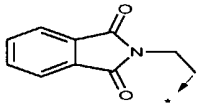
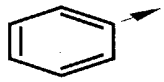
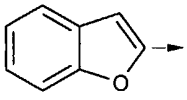
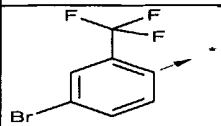
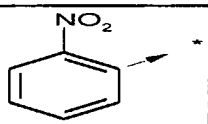
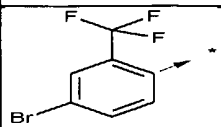
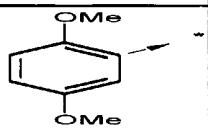


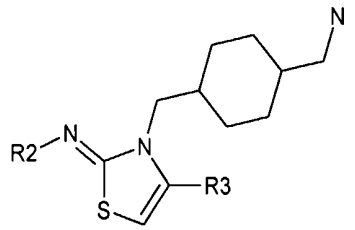
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
820			86,5	4,75	457,34
821			90,5	5,94	514,34
822			90,1	5,21	436,26
823			89,7	6,18	496,37
824			79,4	4,56	422,22
825			92,5	5,08	408,32
826			93	4,45	406,23
827			90,2	4,63	414,26
828			76,3	4,01	409,31
829			94	5,08	466,36
830			90,7	4,34	388,25
831			92,9	5,29	448,36

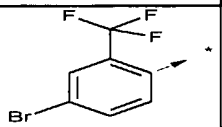
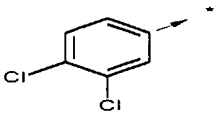
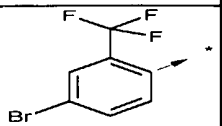
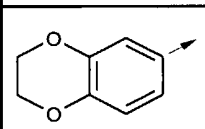
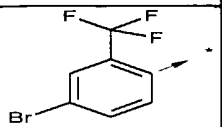
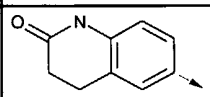
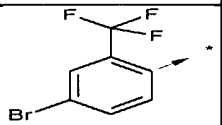
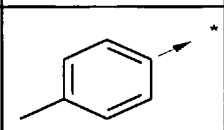
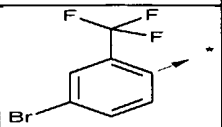
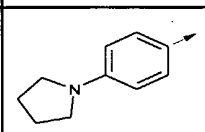
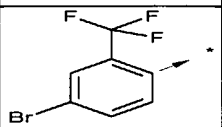
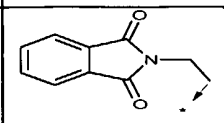
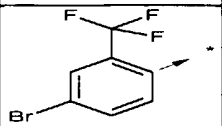
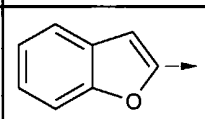
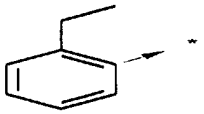
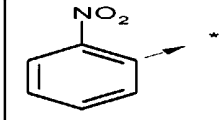
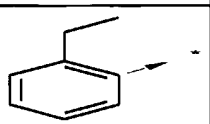
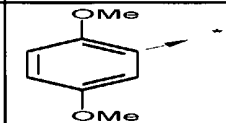
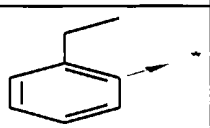
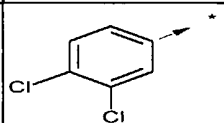
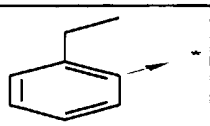
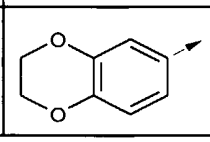


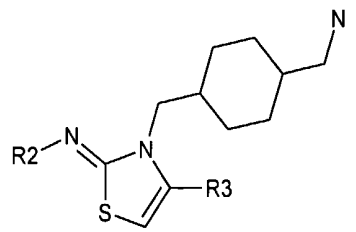
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
832			56	5,3	478,29
833			83,9	5,7	464,38
834			82,1	5,19	462,29
835			80,5	5,31	470,35
836			70,6	4,8	465,39
837			82,9	5,67	522,41
838			81	5,07	444,33
839			83,5	5,91	504,41

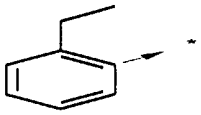
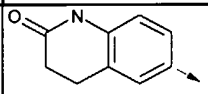
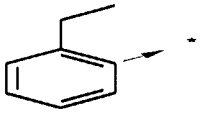
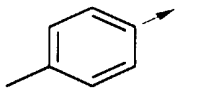
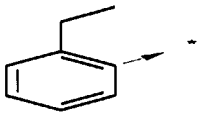
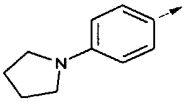
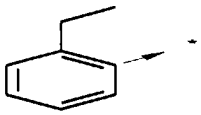
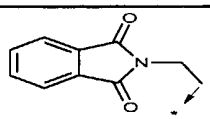
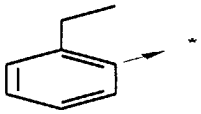
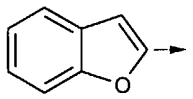
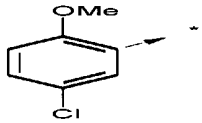
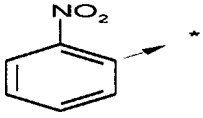
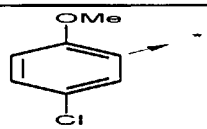
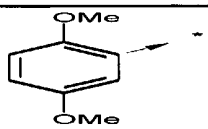
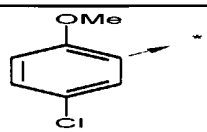
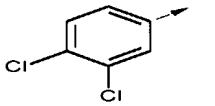
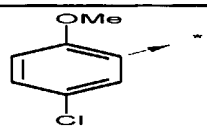
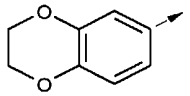
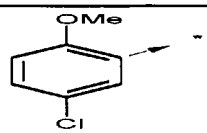
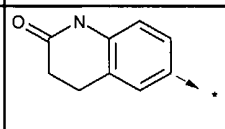
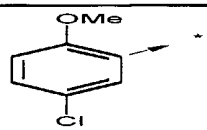
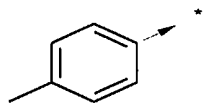


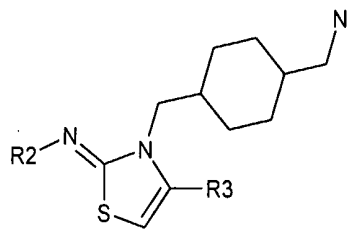
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
840			35 + 64	3,68 + 3,78	423,2
841			98	3,7	438,3
842			35 + 63	4,3 + 4,4	446,2
843			97	3,71	436,3
844			32 + 65	3,28 + 3,34	447,3
845			96	3,84	392,3
846			96	4,18	447,3
847			30 + 64	3,62 + 3,64	475,3
848			36 + 61	4,46 + 4,61	418,3
849			96	5,89	569,1
850			94	6,09	584,2

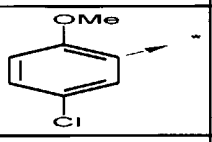
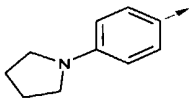
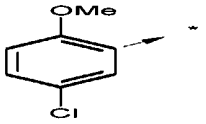
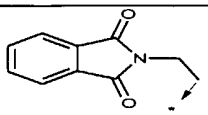
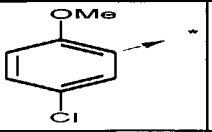
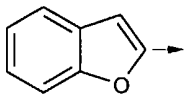
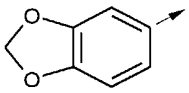
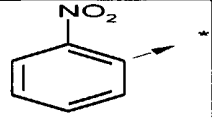
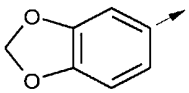
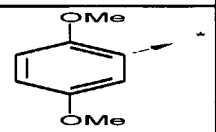
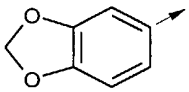
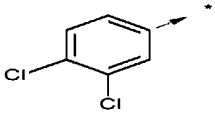
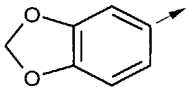
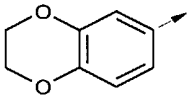
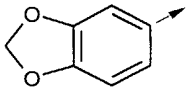
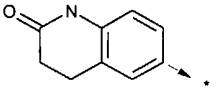
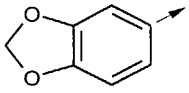
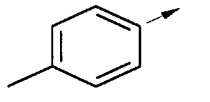
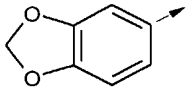
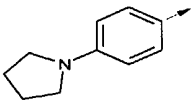
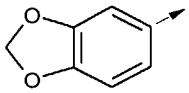
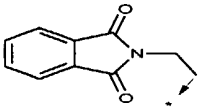


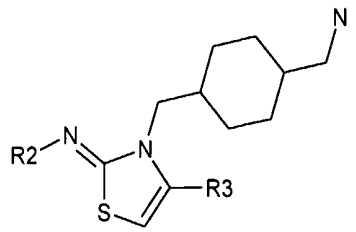
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
851			57 + 39	6,55 + 6,6	592,1
852			96	6,16	582,2
853			28 + 59	5,53 + 5,61	593,2
854			95	6,35	538,2
855			54 + 41	6,8 + 6,88	593,3
856			94	5,96	621,2
857			56 + 39	6,46 + 6,55	564,2
858			34 + 63	4,09 + 4,2	451,3
859			96	4,03	466,4
860			33 + 64	4,69 + 4,76	474,3
861			27 + 70	4,04 + 4,07	464,4

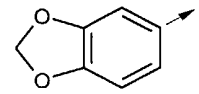
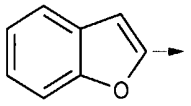
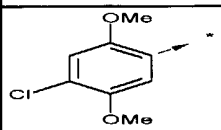
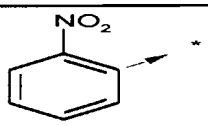
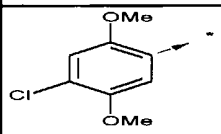
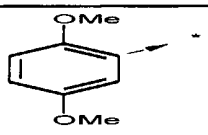
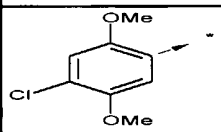
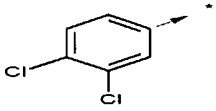
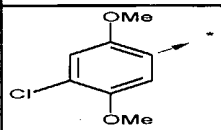
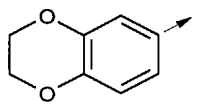
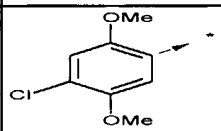
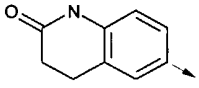
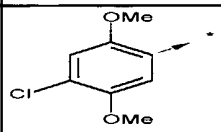
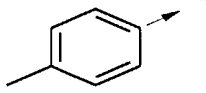
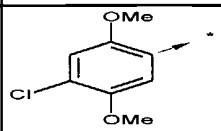
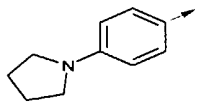
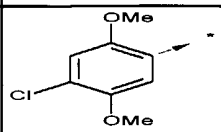
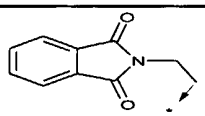
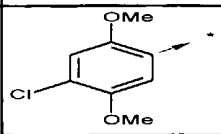
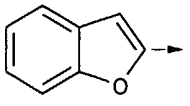
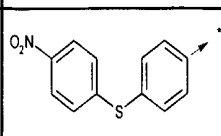
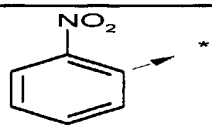


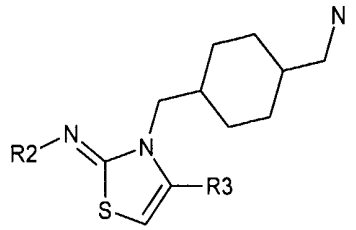
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
862			33 + 63	3,63 + 3,71	475,4
863			95	4,18	420,4
864			89	4,46	475,4
865			22 + 68	3,94 + 3,98	503,4
866			35 + 62	4,9 + 5,01	446,4
867			35 + 61	4,39 + 4,52	487,3
868			33 + 63	4,22 + 4,29	502,3
869			35 + 62	5,08 + 5,2	510,2
870			31 + 63	4,26 + 4,34	500,3
871			33 + 62	3,82 + 3,91	511,3
872			31 + 62	4,42 + 4,51	456,3

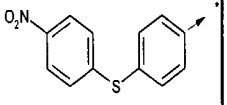
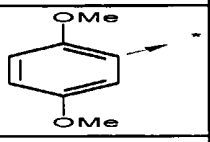
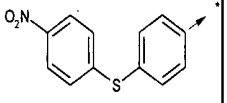
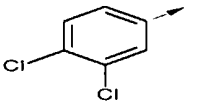
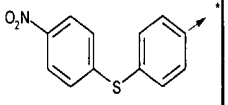
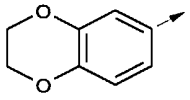
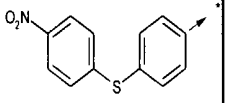
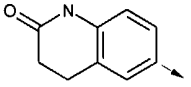
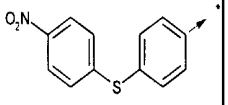
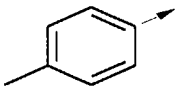
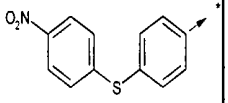
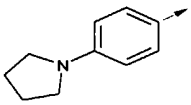
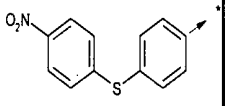
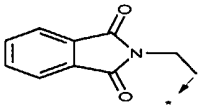
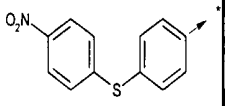
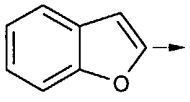
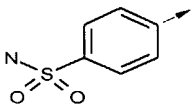
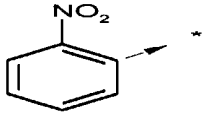
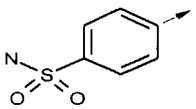
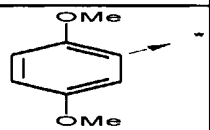
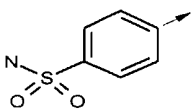
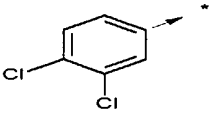


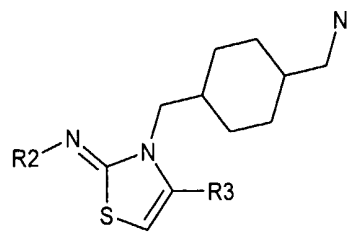
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
873			29 + 64	4,66 + 4,72	511,4
874			33 + 57	4,11 + 4,2	539,3
875			35 + 62	5,26 + 5,39	482,3
876			32 + 65	3,63 + 3,7	467,3
877			97	3,69	482,4
878			35 + 62	4,2 + 4,28	490,3
879			94	3,69	480,3
880			28 + 68	3,3 + 3,33	491,3
881			96	3,8	436,3
882			96	4,18	491,4
883			94	3,63	519,3

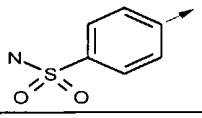
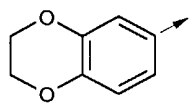
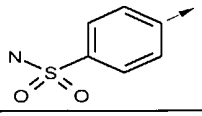
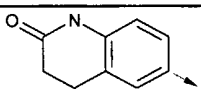
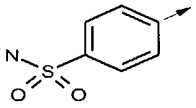
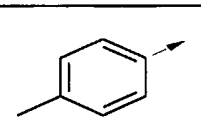
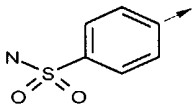
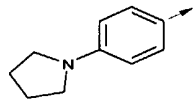
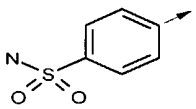
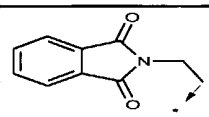
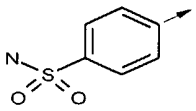
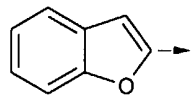


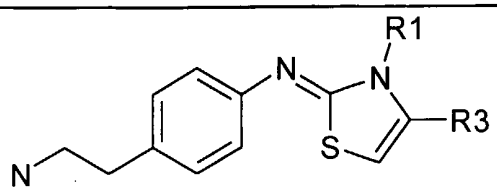
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
884			36 + 61	4,28 + 4,42	462,3
885			36 + 62	4,24 + 4,36	517,3
886			28 + 69	4,15 + 4,21	532,3
887			35 + 62	4,84 + 4,96	540,2
888			33 + 64	4,15 + 4,22	530,3
889			32 + 63	3,76 + 3,84	541,3
890			32 + 63	4,28 + 4,36	486,3
891			24 + 73	4,56 + 4,6	541,3
892			31 + 59	4,05 + 4,11	569,3
893			35 + 61	4,99 + 5,14	512,3
894			33 + 64	5,59 + 5,7	576,3

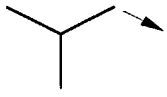
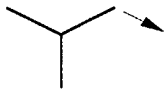
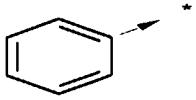
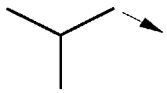
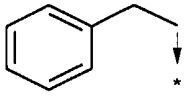
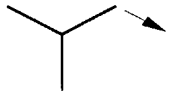
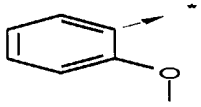
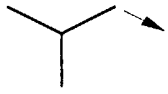
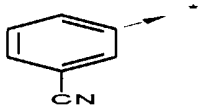
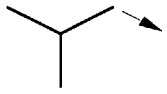
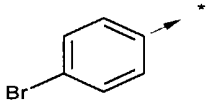
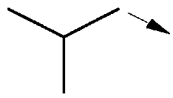
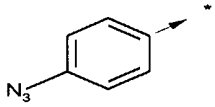
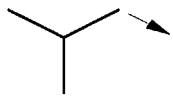
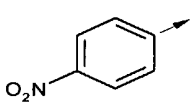
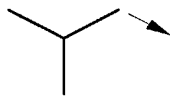
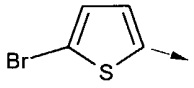
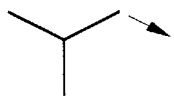
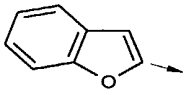
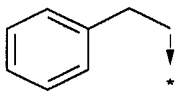
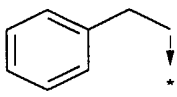
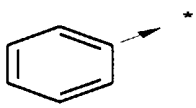


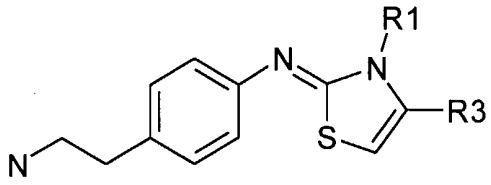
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
895			35 + 61	5,29 + 5,39	591,3
896			26 + 71	6,32 + 6,35	599,2
897			34 + 63	5,41 + 5,5	589,3
898			35 + 61	4,88 + 4,99	600,3
899			35 + 62	5,63 + 5,72	545,3
900			34 + 61	5,76 + 5,86	600,3
901			34 + 68	5,16 + 5,28	628,3
902			98	6,45	571,3
903			35 + 60	3,84 + 3,93	502,3
904			32 + 62	3,72 + 3,79	517,3
905			32 + 62	4,59 + 4,68	525,2

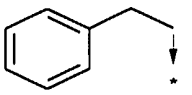
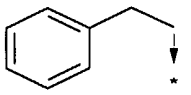
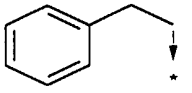
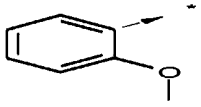
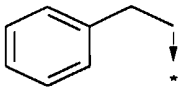
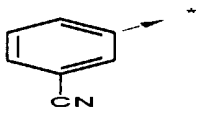
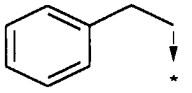
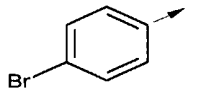
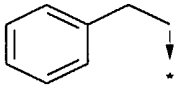
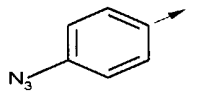
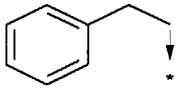
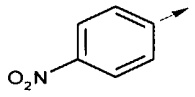
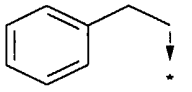
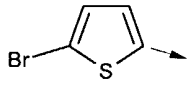
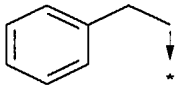
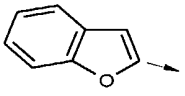
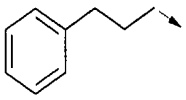
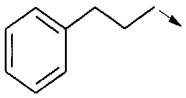
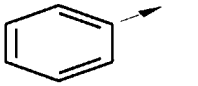
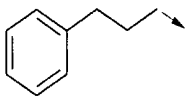
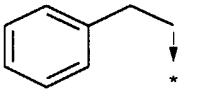
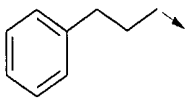
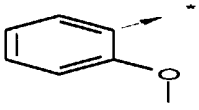


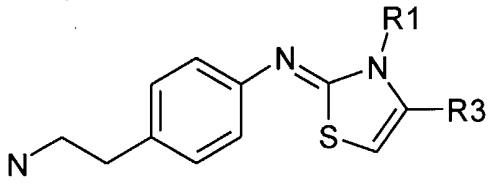
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
906			33 + 61	3,75 + 3,82	515,3
907			29 + 64	3,18 + 3,26	526,3
908			32 + 59	4 + 4,09	471,3
909			32 + 60	4,28 + 4,38	526,3
910			34 + 56	3,62 + 3,71	554,3
911			31 + 63	4,58 + 4,66	497,3

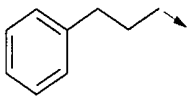
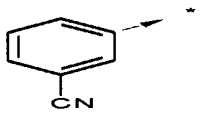
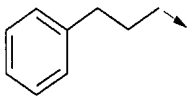
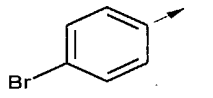
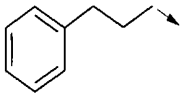
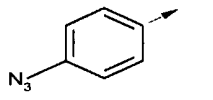
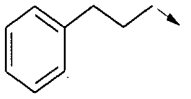
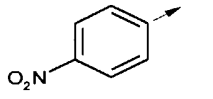
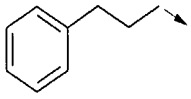
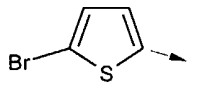
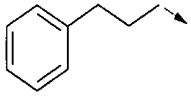
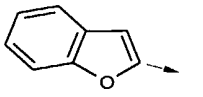
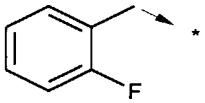
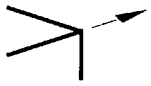
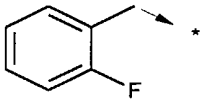
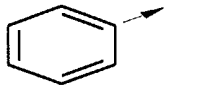
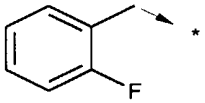
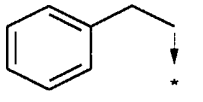
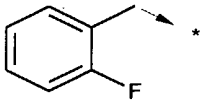
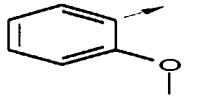
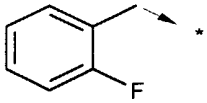
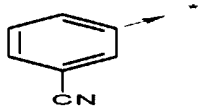
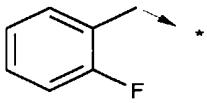
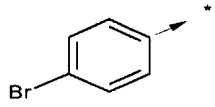


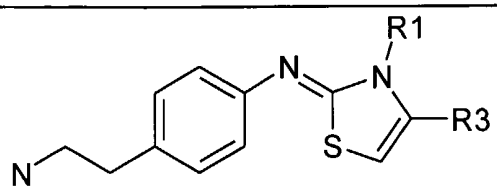
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
912			6,8 + 91,2	3,6 + 3,76	332,22
913			88,1	3,94	352,19
914			89,6	4,22	380,22
915			61,6	3,95	382,17
916			83,5	3,8	377,19
917			84,2	4,41	430,10
918			70,9	4,24	393,18
919			84,1	4,1	397,16
920			82,2	4,55	436,05
921			82,8	4,66	392,17
922			98	4,25	380,22
923			91,1	4,26	400,17

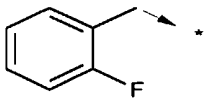
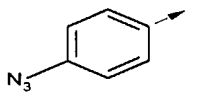
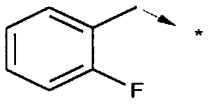
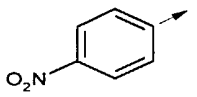
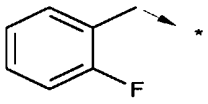
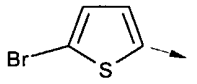
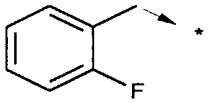
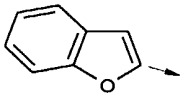
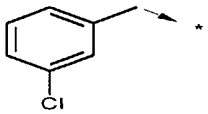
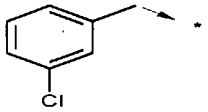
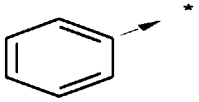
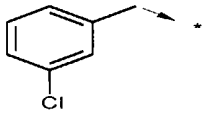
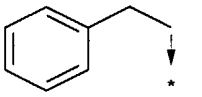
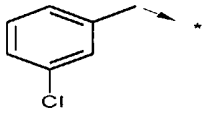
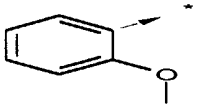
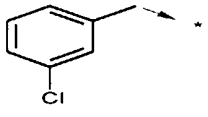
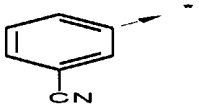
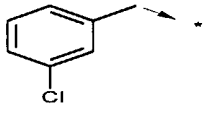
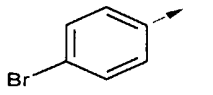
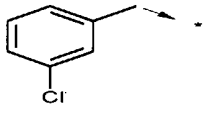
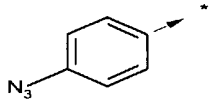
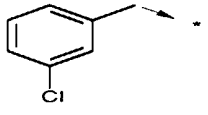
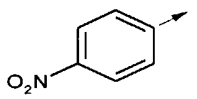


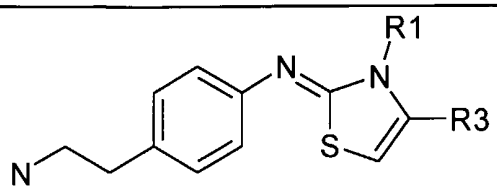
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
924			92,4	4,46	428,21
925			93,8	4,23	430,20
926			86,4	4,14	425,17
927			92,3	4,7	478,11
928			82	4,56	441,18
929			90,9	4,44	445,18
930			89,8	4,9	484,07
931			86,4	5.0	440,17
932			97,2	4,38	394,22
933			86,3	4,48	414,18
934			92,6	4,68	442,22
935			91	4,44	444,22

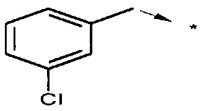
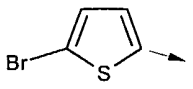
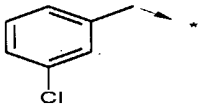
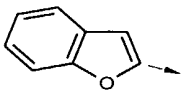
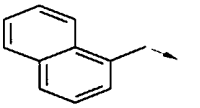
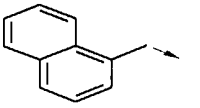
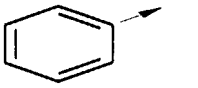
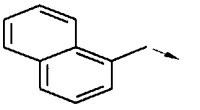
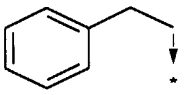
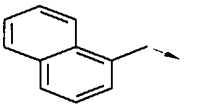
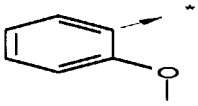
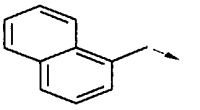
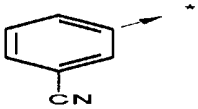
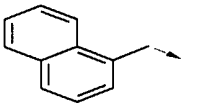
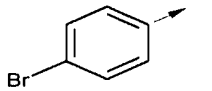
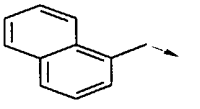
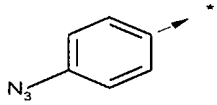
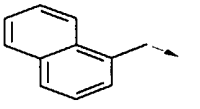
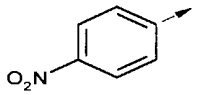
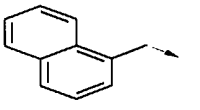
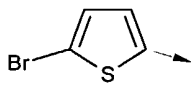
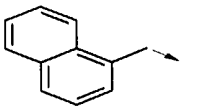
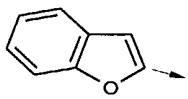


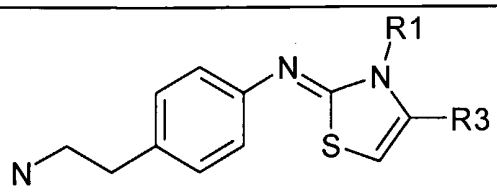
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
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937			88,2	4,86	492,12
938			83,6	4,71	455,2
939			87,8	4,59	459,19
940			89,8	5.0	498,09
941			83,9	5,14	454,20
942			87,7	4,26	384,17
943			94,7	4,5	404,15
944			18,6 + 76,4	4,2 + 4,64	432,18
945			95,2	4,32	434,16
946			92	4,46	429,15
947			94,4	5,08	482,06

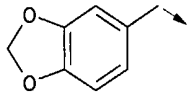
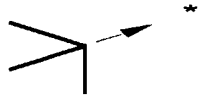
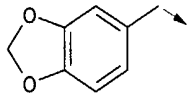
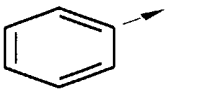
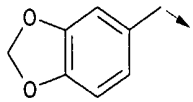
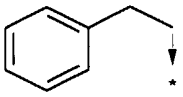
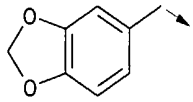
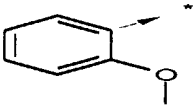
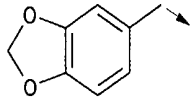
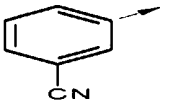
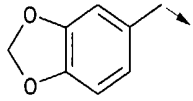
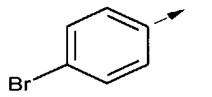
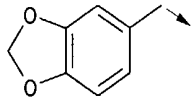
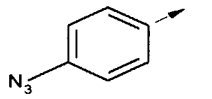
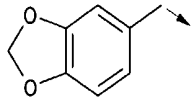
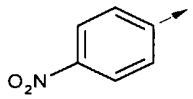
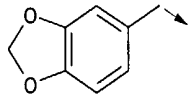
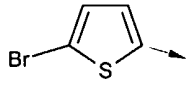
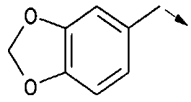
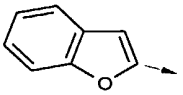
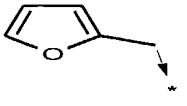
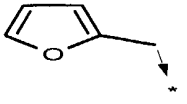
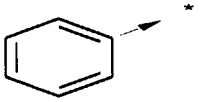


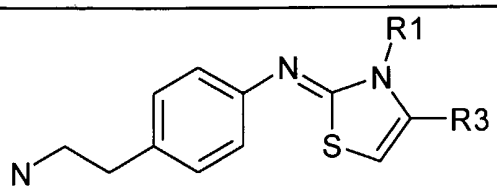
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
948			93	4,86	445,16
949			94,2	4,82	449,13
950			93,1	5,34	488,03
951			93,7	5,47	444,16
952			91,5	4,43	400,13
953			95	4,82	420,12
954			14,8 + 81,2	4,38 + 4,88	448,15
955			95,8	4,64	450,13
956			95	4,79	445,11
957			95,4	5,4	498,06
958			93,9	5,14	461,12
959			94,5	5,12	465,10

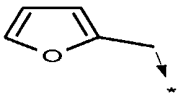
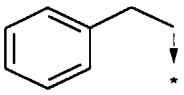
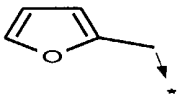
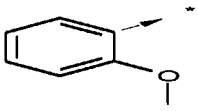
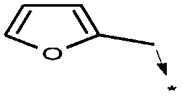
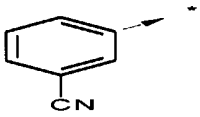
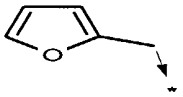
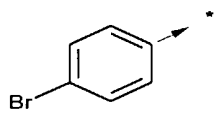
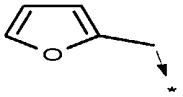
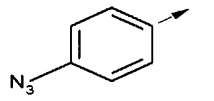
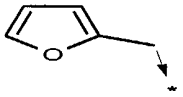
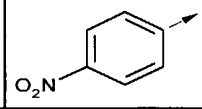
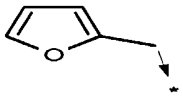
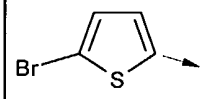
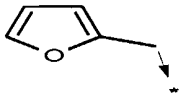
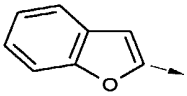


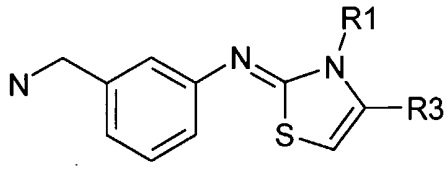
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
960			94,6	5,62	504,00
961			96,4	5,74	460,13
962			6,5 + 87,5	4,2 + 4,54	416,19
963			92,9	4,76	436,17
964			17,3 + 6,2	4,5 + 4,9	464,21
965			92,6	4,64	466,17
966			89	4,76	461,16
967			94,1	5,32	514,09
968			92,1	5,09	477,19
969			90,5	5,1	481,16
970			92	5,56	520,02
971			93	5,72	476,17

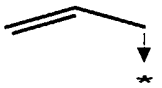
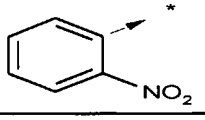
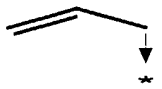
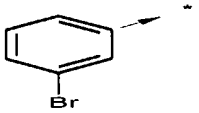
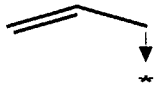
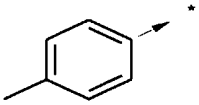
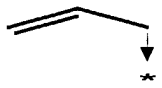
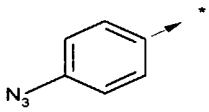
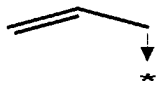
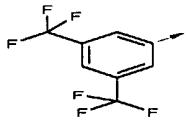
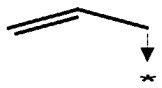
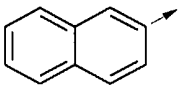
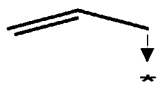
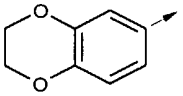
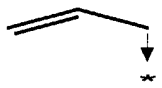
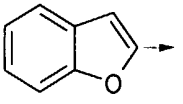
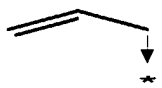
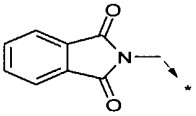
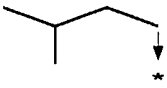
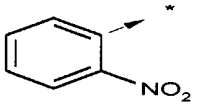
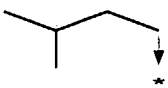
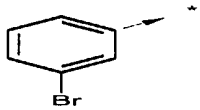
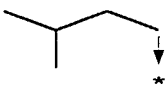
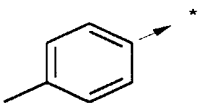


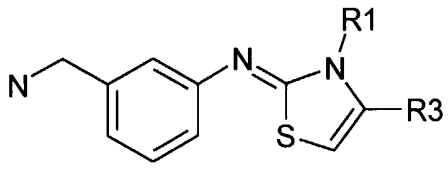
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
972			91,6	4	410,16
973			89,7	4,28	430,15
974			83,4	4,46	458,19
975			96,9	4,19	460,16
976			58,2	4,29	455,12
977			81,4	4,84	508,06
978			85,8	4,64	471,15
979			46,8	4,62	475,14
980			77,4	5,06	514,02
981			61,7	5,24	470,16
982			4,8	3,54	356,15
983			71,4	4,1	376,14

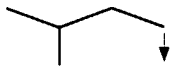
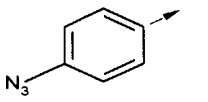
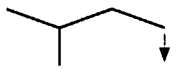
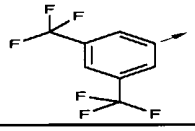
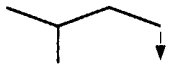
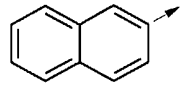
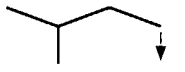
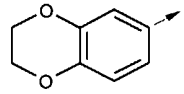
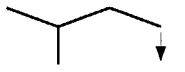
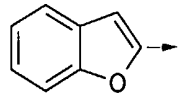
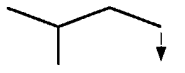
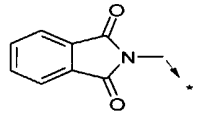
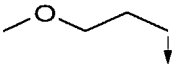
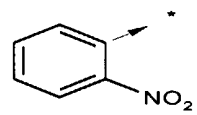
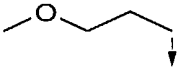
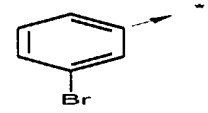
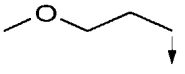
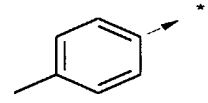
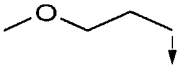
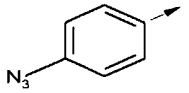
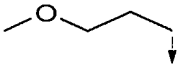
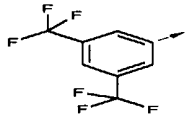
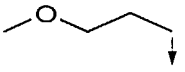
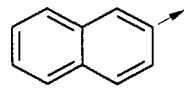


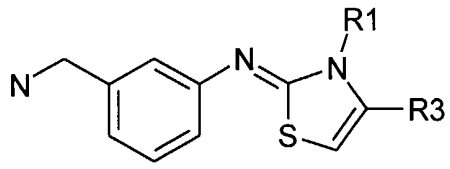
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
984			79	4,3	404,17
985			88,3	4.0	406,13
986			12,2	5,32	401,11
987			46,5	4,72	454,04
988			56,3	4,49	417,15
989			13,8	5,52	421,12
990			35,3	4,95	460,02
991			9,1	5,71	416,11

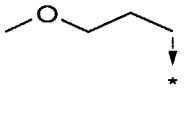
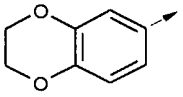
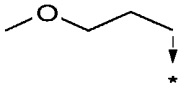
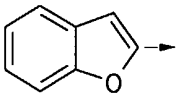
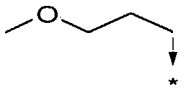
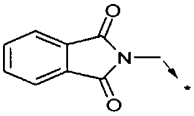
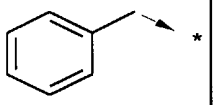
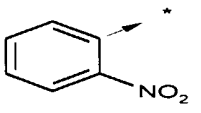
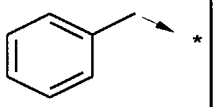
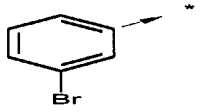
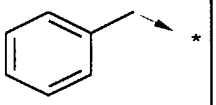
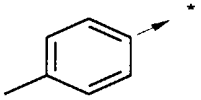
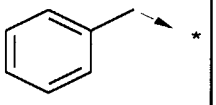
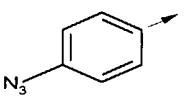
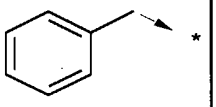
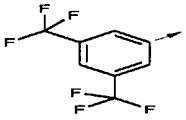
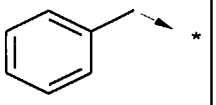
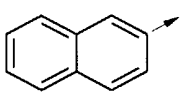
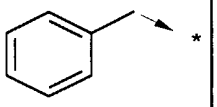
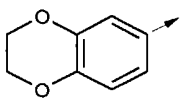
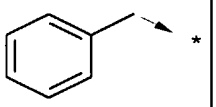
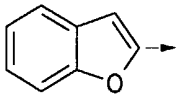
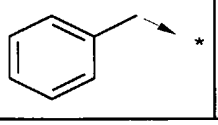
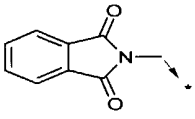


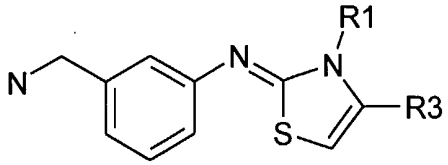
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
992			95,3	3,33	367,12
993			91,9	3,97	400,03
994			92,5	3,64	336,17
995			83,7	3,75	363,13
996			94,7	4,88	458,11
997			93,1	4,03	372,14
998			92,6	3,37	380,14
999			92,1	4,36	362,12
1000			91	3,32	405,11
1001			87,8	3,9	397,14
1002			64,2	4,46	430,09
1003			61,6	4,18	366,23

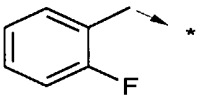
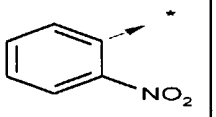
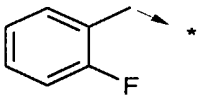
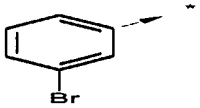
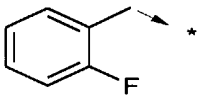
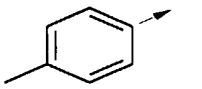
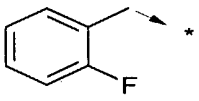
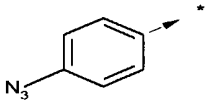
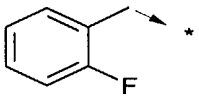
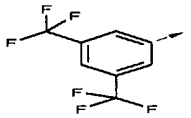
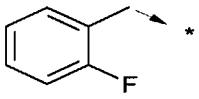
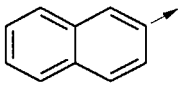
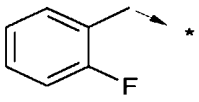
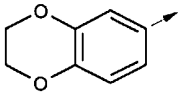
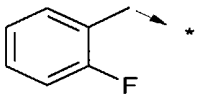
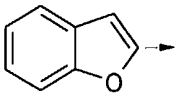
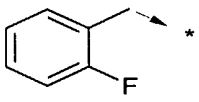
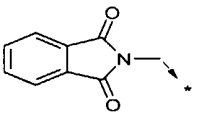
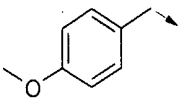
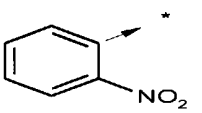
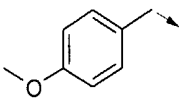
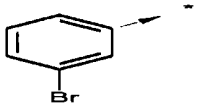
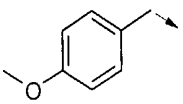
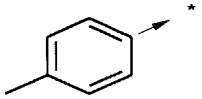


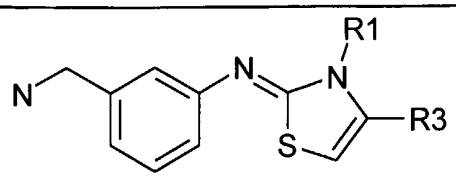
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
1004			45,6	4,26	393,16
1005			72,4	5,28	488,17
1006			67	4,47	402,17
1007			51,1	3,86	410,16
1008			57,6	4,86	392,16
1009			75,1	3,92	435,16
1010			90,7	3,24	399,13
1011			79,6	3,79	432,06
1012			74,5	3,55	368,16
1013			58,8	3,62	395,15
1014			81	4,65	490,15
1015			86,8	3,88	404,17

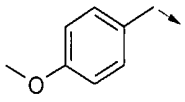
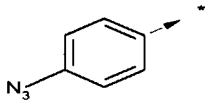
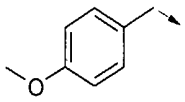
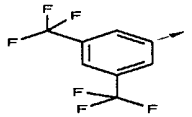
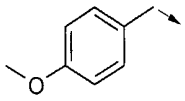
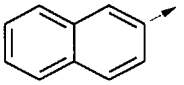
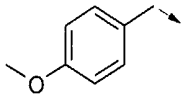
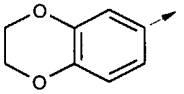
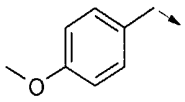
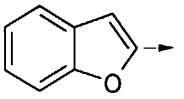
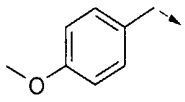
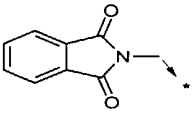
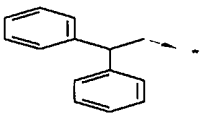
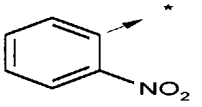
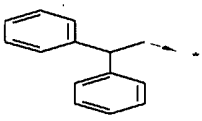
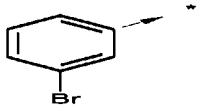
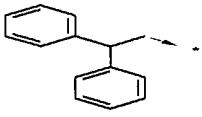
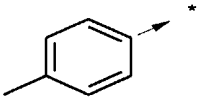
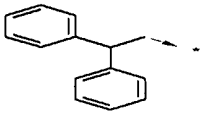
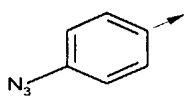
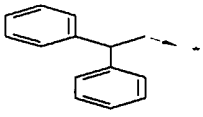
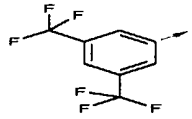
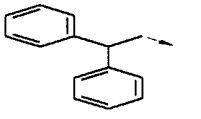
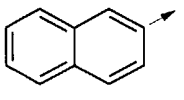


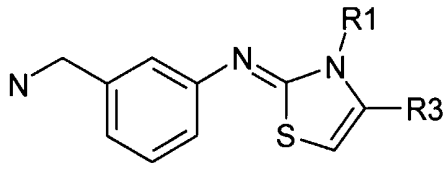
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
1016			71,4	3,3	412,13
1017			73,7	4,13	394,15
1018			80,5	3,3	437,15
1019			94,6	4,19	417,10
1020			94,8	4,76	450,07
1021			92,9	4,42	386,13
1022			88,8	4,56	413,11
1023			94,1	5,48	508,13
1024			93,8	4,79	422,13
1025			92,3	4,04	430,15
1026			90	5,08	412,10
1027			93,2	3,95	455,13

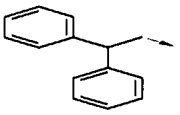
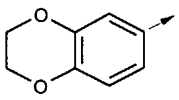
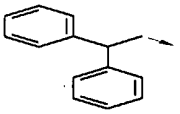
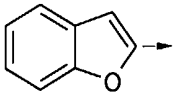
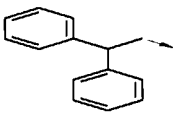
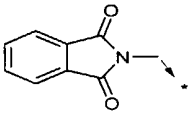
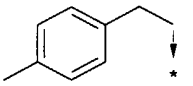
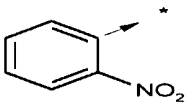
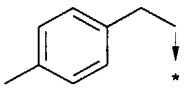
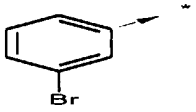
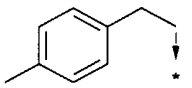
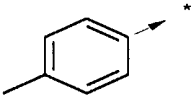
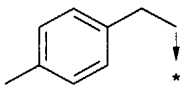
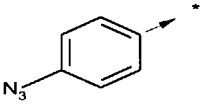
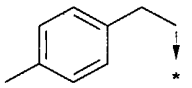
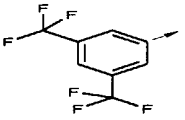
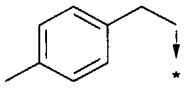
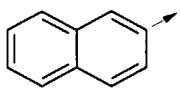
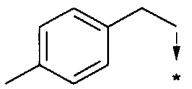
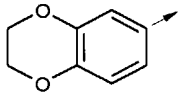
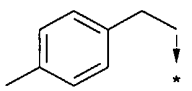
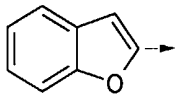
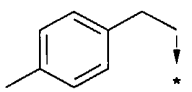
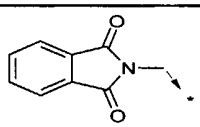


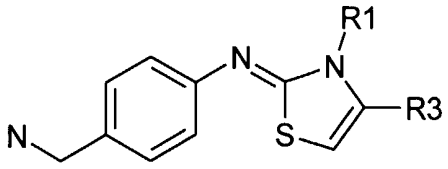
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
1028			92,6	4,3	435,1
1029			92,8	4,9	470,1
1030			89,2	4,6	404,1
1031			89,2	4,76	431,1
1032			94,3	5,6	526,1
1033			93,5	5	440,2
1034			92,4	4,2	448,1
1035			87,9	5,2	430,1
1036			93,6	4,1	473,2
1037			80,4	4,16	447,14
1038			72,7	4,72	480,08
1039			77	4,39	416,14

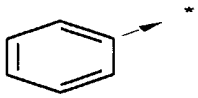
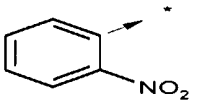
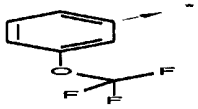
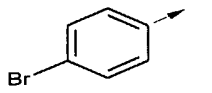
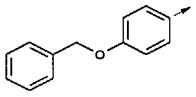
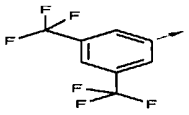
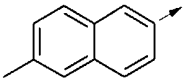
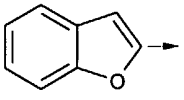
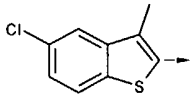
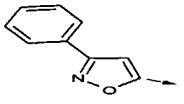
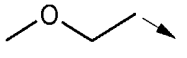
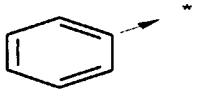
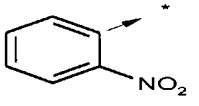


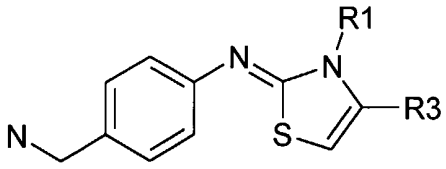
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
1040			59,2	4,5	443,16
1041			16,8	5,98	538,12
1042			59,5	4,74	452,16
1043			74	4,02	460,16
1044			26,3	5,52	442,13
1045			91	3,82	485,17
1046			89,8	5,09	507,19
1047			84,5	5,52	540,09
1048			86	5,06	476,21
1049			75,6	5,22	503,21
1050			90,3	6,14	598,15
1051			85,9	5,38	512,22

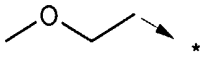
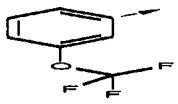
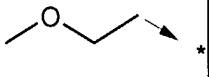
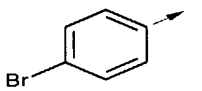
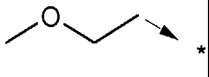
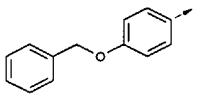
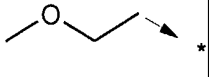
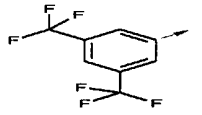
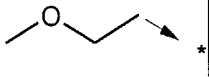
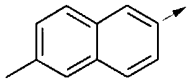
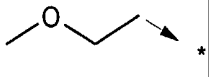
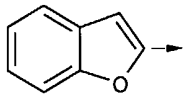
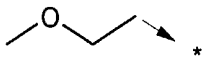
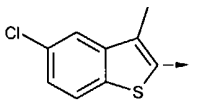
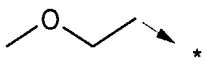
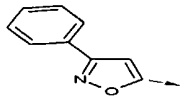
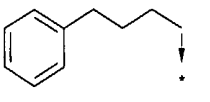
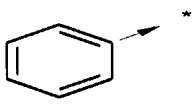
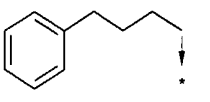
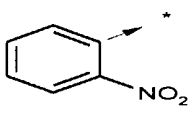
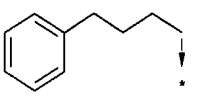
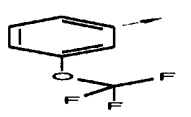
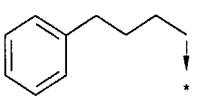
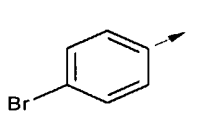


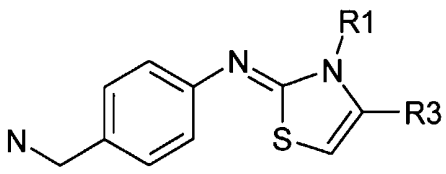
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
1052			81,3	4,68	520,19
1053			83,3	5,66	502,20
1054			82	4,92	545,17
1055			93,1	4,34	445,16
1056			81,5	4,77	478,10
1057			79,9	4,46	414,17
1058			70,2	4,56	441,15
1059			85,8	5,56	536,11
1060			84,1	4,73	450,19
1061			78,4	4,12	458,20
1062			83,3	5,13	440,16
1063			83,1	4,22	

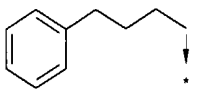
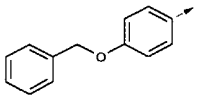
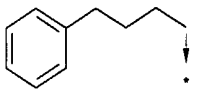
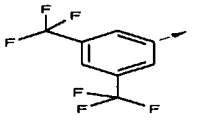
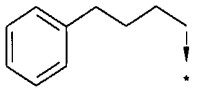
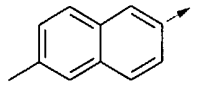
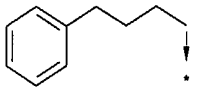
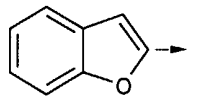
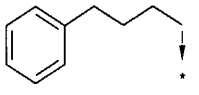
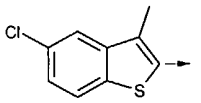
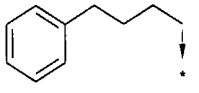
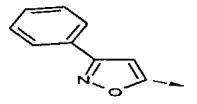
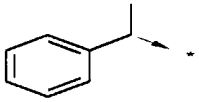
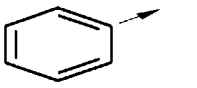
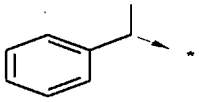
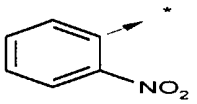
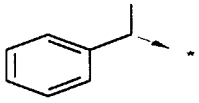
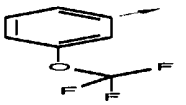
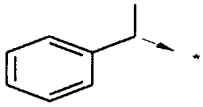
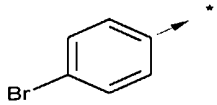
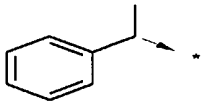
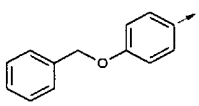
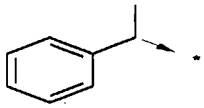
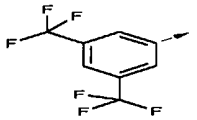


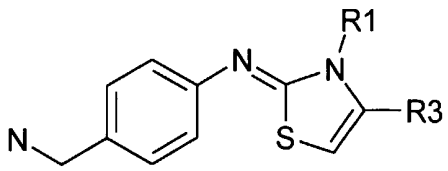
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
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1065			90,4	3,44	383,09
1066			87,3	4,25	422,10
1067			85,9	4,04	416,04
1068			70,5	4,4	444,18
1069			80,1	4,83	474,13
1070			80,6	4,34	402,16
1071			80,8	4,37	378,14
1072			86,5	4,77	442,06
1073			83,4	4,72	405,12
1074			90,5	3,02	340,15
1075			93,5	2,98	385,10

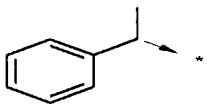
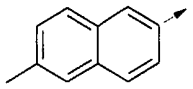
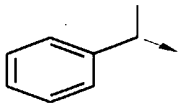
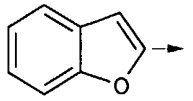
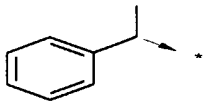
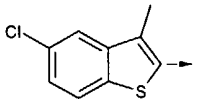
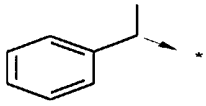
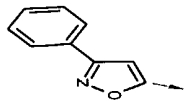
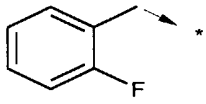
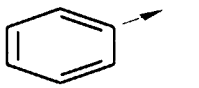
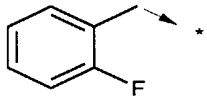
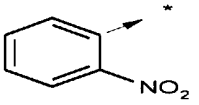
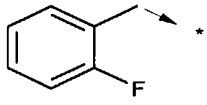
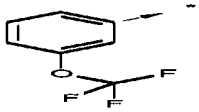
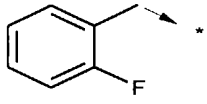
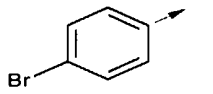
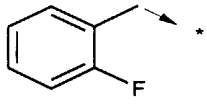
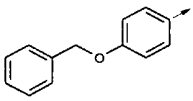
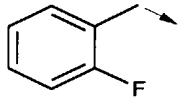
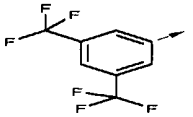
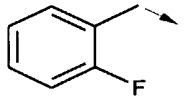
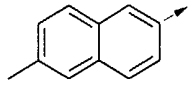
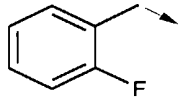
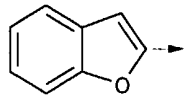


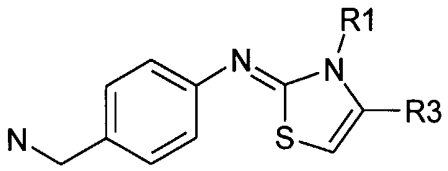
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
1076			91,7	3,9	424,12
1077			90,8	3,62	418,04
1078			80,8	4,09	446,18
1079			88,1	4,6	476,12
1080			91,5	3,98	404,16
1081			89,2	3,87	380,13
1082			87,3	4,36	444,10
1083			90,6	4,24	407,13
1084			86,4	4,24	414,15
1085			91,8	4,21	459,17
1086			88,2	4,89	498,19
1087			85,8	4,71	492,12

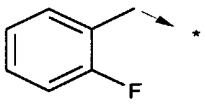
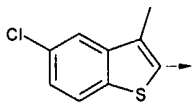
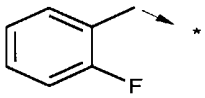
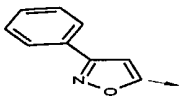
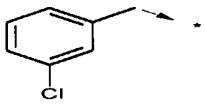
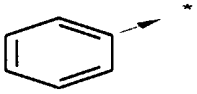
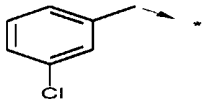
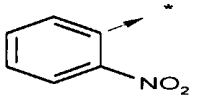
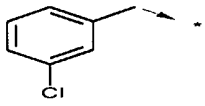
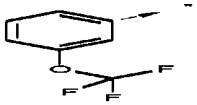
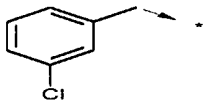
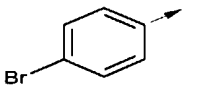
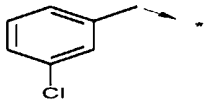
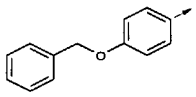
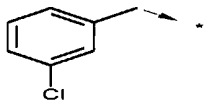
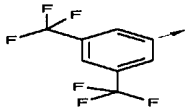
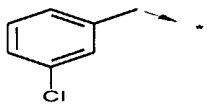
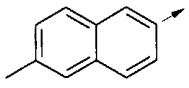
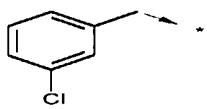
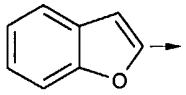
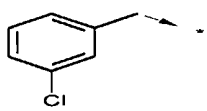
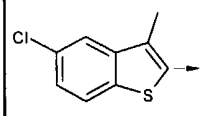
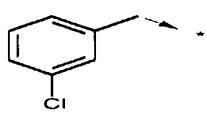
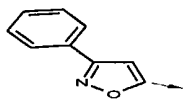


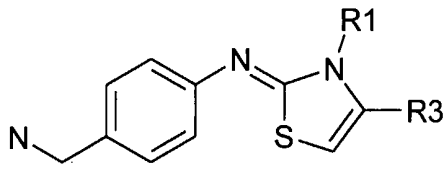
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
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1089			83,3	5,45	550,17
1090			84,9	4,9	478,24
1091			86,1	5,08	454,19
1092			78	5,38	518,14
1093			84,5	5,38	481,21
1094			37,5	3,36	386,14
1095			57,1	3,35	431,14
1096			44	3,78	470,17
1097			42	3,62	464,09
1098			38,8	4,14	492,21
1099			45,2	3,98	522,14

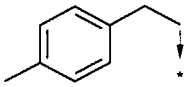
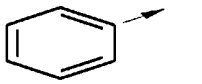
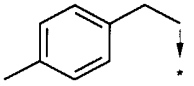
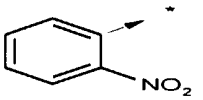
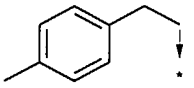
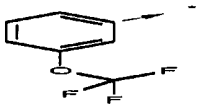
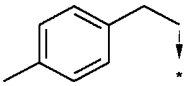
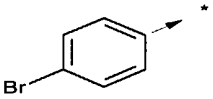
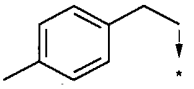
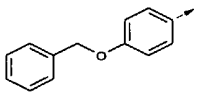
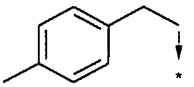
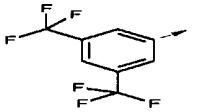
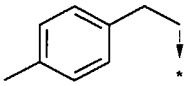
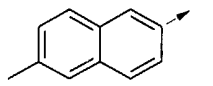
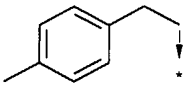
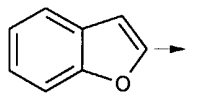
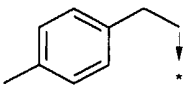
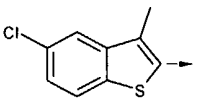
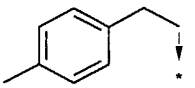
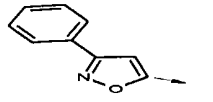
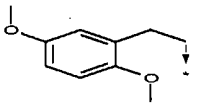
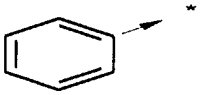
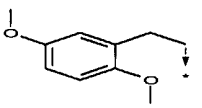
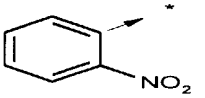


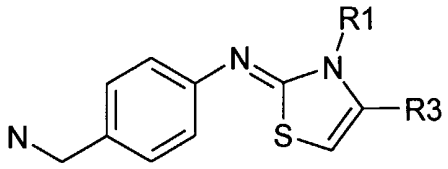
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
1100			33,4	3,99	450,20
1101			44,7	3,68	426,14
1102			33,4	4,08	490,12
1103			42,4	3,67	453,17
1104			92,6	4,23	390,14
1105			91,9	4,1	439,1
1106			92,1	5	474,13
1107			93	4,85	468,04
1108			86,5	5,04	496,18
1109			92,8	5,5	526,13
1110			92,8	5,1	454,17
1111			92	5,1	430,10

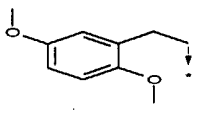
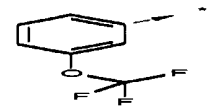
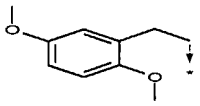
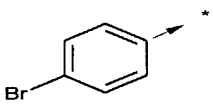
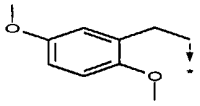
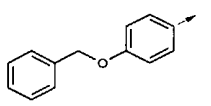
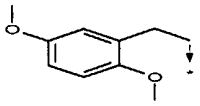
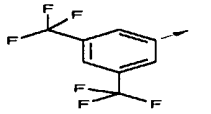
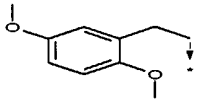
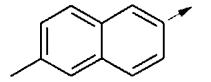
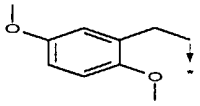
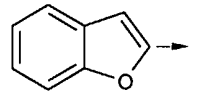
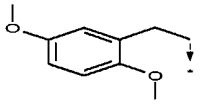
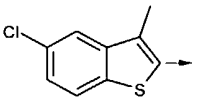
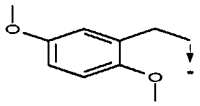
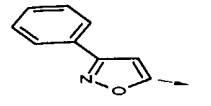


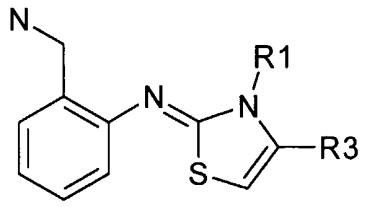
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
1112			92,8	5,48	494,08
1113			92,8	5,1	457,18
1114			93,8	4,6	406,10
1115			93,6	4,5	451,03
1116			93,1	5,2	490,10
1117			94,5	5,1	483,99
1118			89,54	5,29	512,13
1119			95,2	5,6	542,1
1120			92,8	5,38	470,15
1121			93,4	5,3	445,94
1122			94,7	5,7	510,05
1123			94,3	5,3	473,04

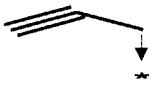
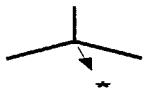
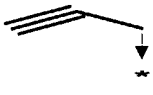
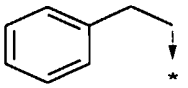
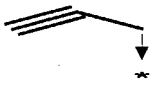
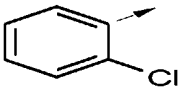
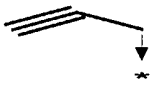
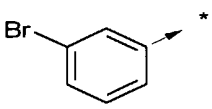
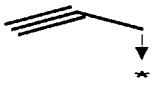
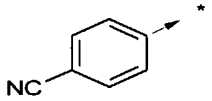
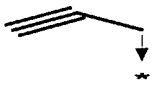
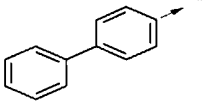
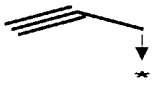
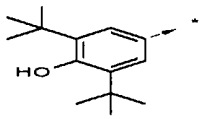
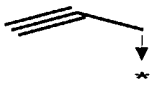
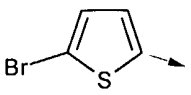
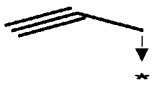
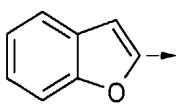
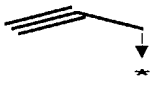
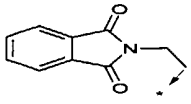
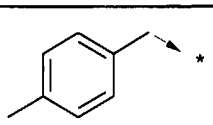
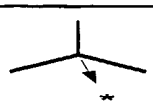


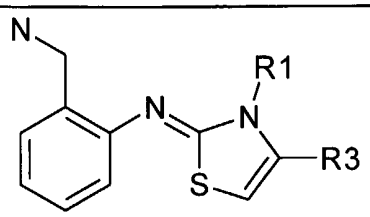
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
1124			89,5	4,06	400,12
1125			92,1	4,13	445,13
1126			88,9	4,81	484,15
1127			88,8	4,56	478,09
1128			82,4	4,76	506,20
1129			88,6	5,36	536,12
1130			85,7	4,78	464,18
1131			84	4,94	440,15
1132			64,3	5,38	504,10
1133			88,4	5,16	467,17
1134			82,7	3,76	446,16
1135			89	3,77	491,14

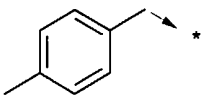
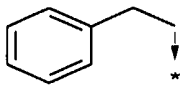
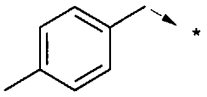
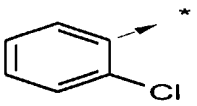
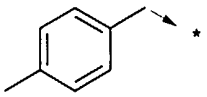
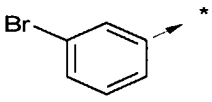
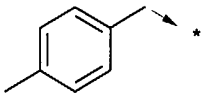
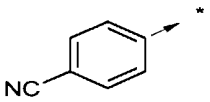
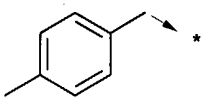
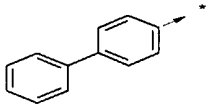
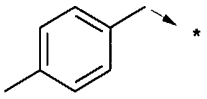
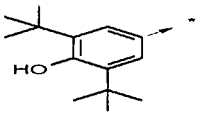
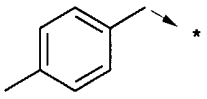
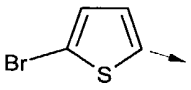
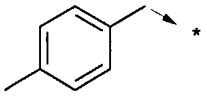
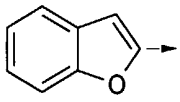
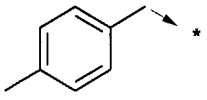
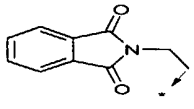
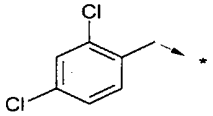
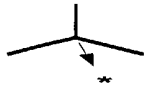
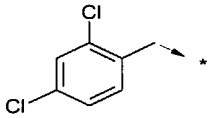
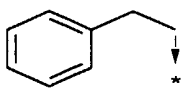


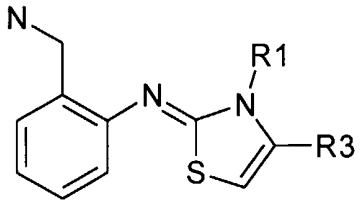
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
1136			87,1	4,4	530,13
1137			84,6	4,21	524,08
1138			76	4,52	552,19
1139			85,6	4,98	582,12
1140			83,1	4,44	510,21
1141			88,3	4,6	486,19
1142			1,5	5,07	550,12
1143			84	4,75	513,16

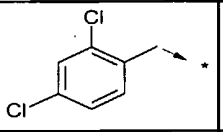
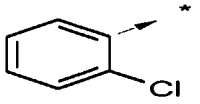
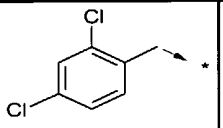
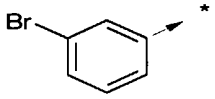
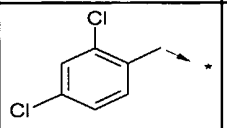
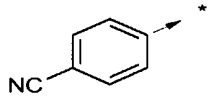
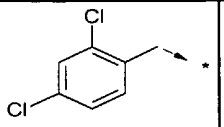
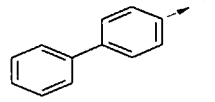
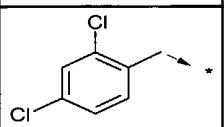
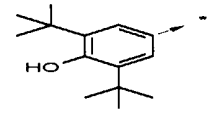
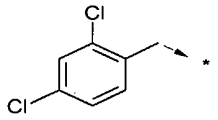
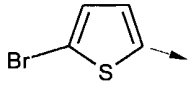
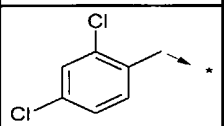
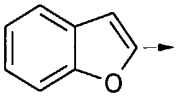
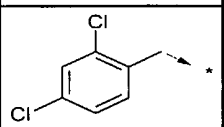
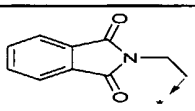
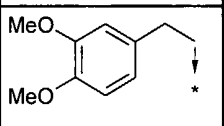
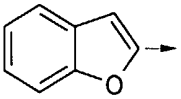
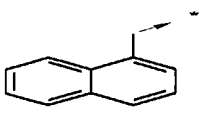
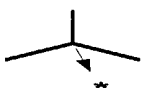
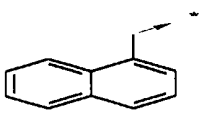
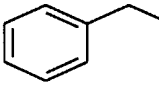


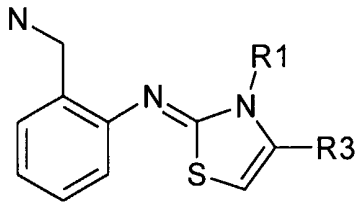
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
1144			75	4,48	300,16
1145			82	4,89	348,16
1146			86,7	4,72	354,09
1147			89	4,96	398,01
1148			87	4,37	345,18
1149			90	5,4	396,1
1150			89	5,9	448,2
1151			85	5	404
1152			85	4,96	360,10
1153			91	4,39	417,14
1154			95	5,14	366,21

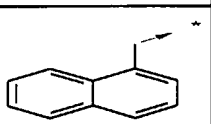
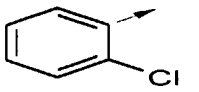
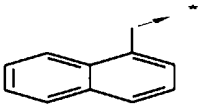
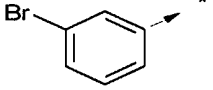
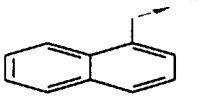
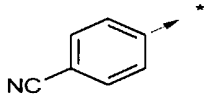
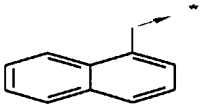
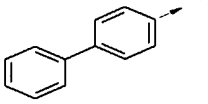
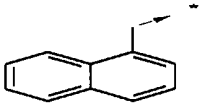
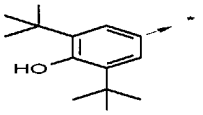
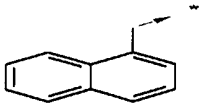
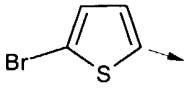
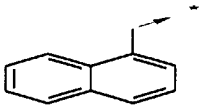
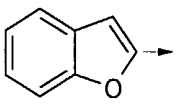
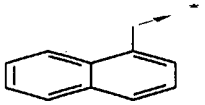
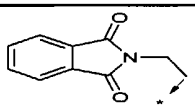
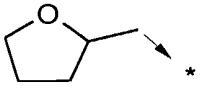
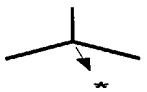
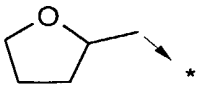
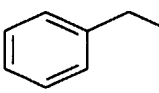
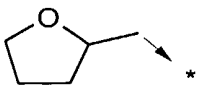
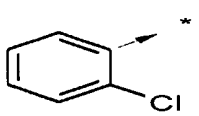


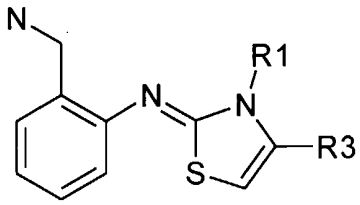
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
1155			92	5,52	414,17
1156			95	5,37	420,13
1157			93	5,6	464,08
1158			94	5	411,2
1159			91	6,04	462,19
1160			91,5	6,4	514,2
1161			92,6	5,7	470,1
1162			93,8	5,6	426,14
1163			91,4	5,02	483,21
1164			96,3	5,55	420,10
1165			78,2	5,81	468,10

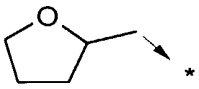
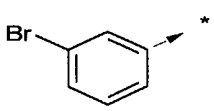
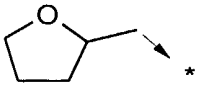
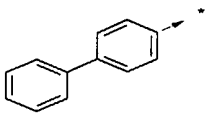
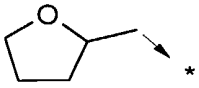
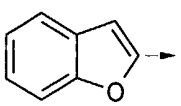
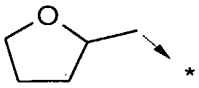
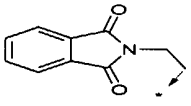


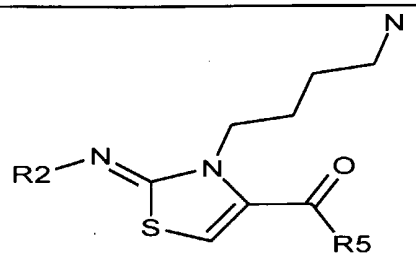
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
1166			96,7	5,6	474,06
1167			96,9	5,8	517,97
1168			94,2	5,18	465,06
1169			94	6,25	516,10
1170			96,4	6,52	568,2
1171			94,6	5,9	524.0
1172			94,9	5,81	480,07
1173			91,9	5,25	537,09
1174			77,4	5,24	486,16
1175			96,8	5,36	402,15
1176			92,4	5,66	450,19

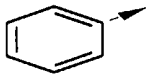
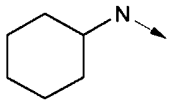
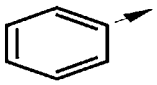
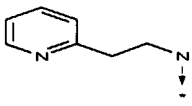
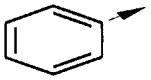
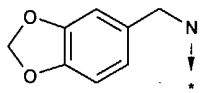
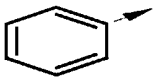
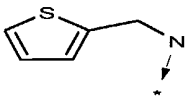
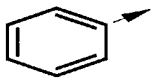
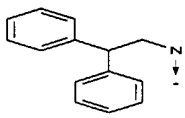
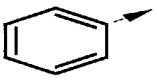
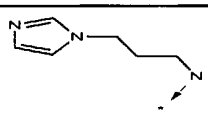
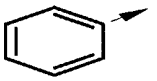
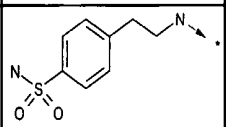
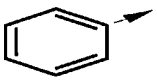
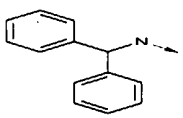
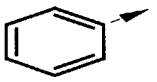
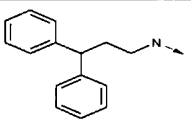
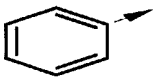
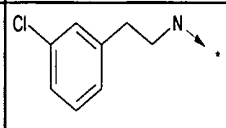
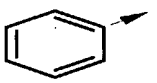
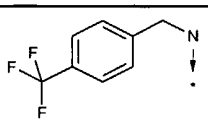


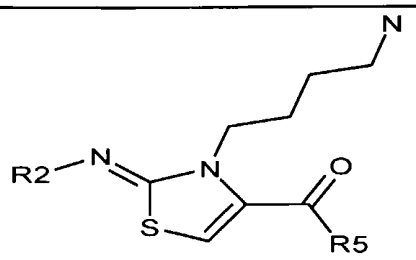
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
1177			93,3	5,48	456,12
1178			93,3	5,7	500,08
1179			90,7	5,12	447,15
1180			91,9	6,12	498,21
1181			95,1	6,5	550,3
1182			92,8	5,7	506.0
1183			94,9	5,74	462,15
1184			91,4	5,13	519,17
1185			73,6	3,52	346,19
1186			71,5	4,5	394,17
1187			82,2	4,58	400,10

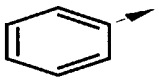
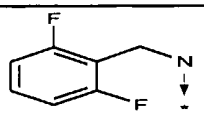
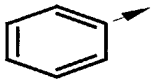
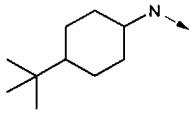
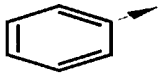
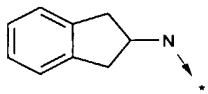
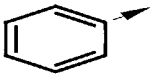
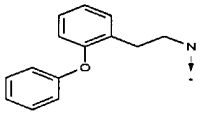
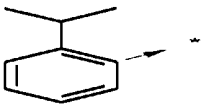
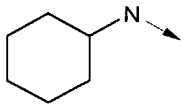
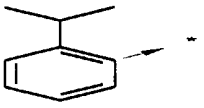
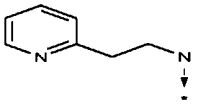
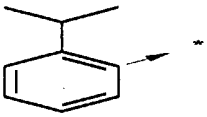
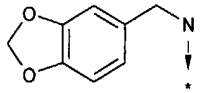
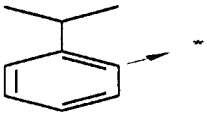
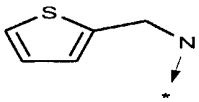
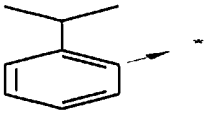
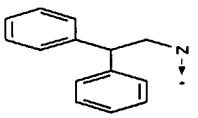
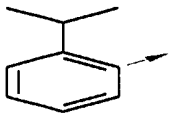
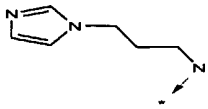
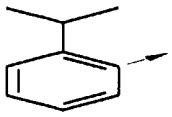
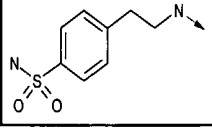


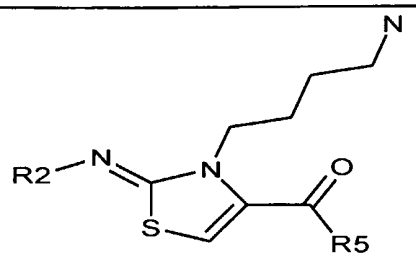
Ex.	R1	R3	Pureté (%)	tr (min.)	$[M+H]^+$
1188			78,6	4,86	444,09
1189			70,5	5,3	442,17
1190			76,8	5	406,13
1191			80,5	4,1	463,19

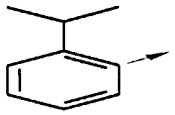
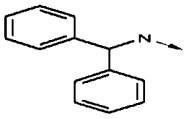
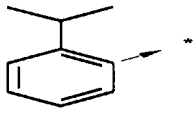
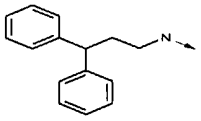
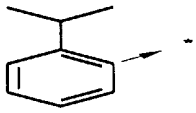
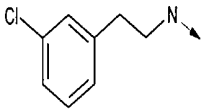
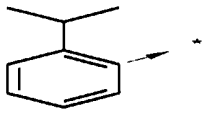
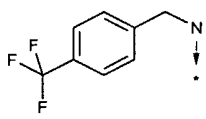
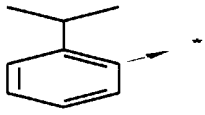
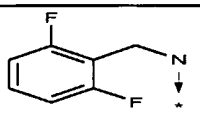
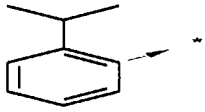
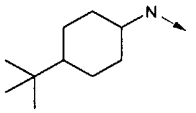
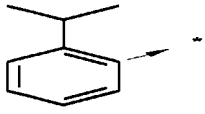
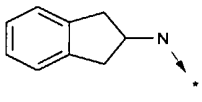
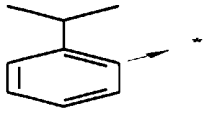
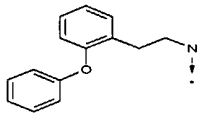
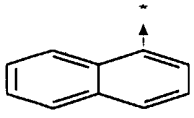
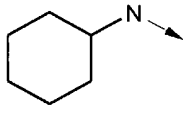
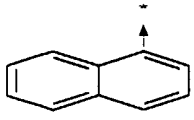
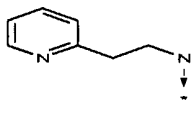
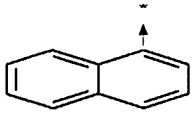
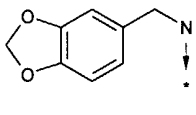


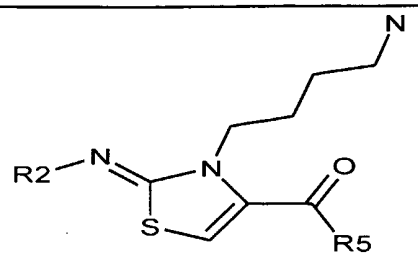
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1192			28,3	3,61	373,15
1193			64,3	2,55	396,15
1194			66,8	3,58	425,13
1195			51,9	3,47	387,07
1196			75,8	4,43	471,21
1197			66,4	2,38	399,15
1198			42,6	3,11	474,14
1199			45,3	4,39	457,18
1200			64	4,62	485,21
1201			55,1	4,09	429,12
1202			75	4,22	449,13

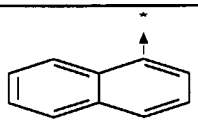
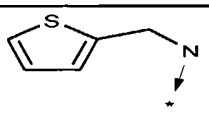
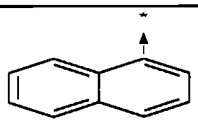
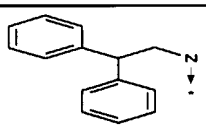
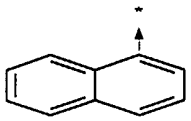
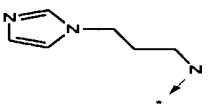
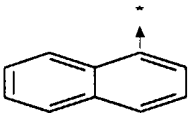
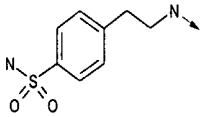
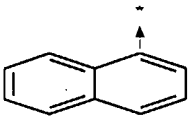
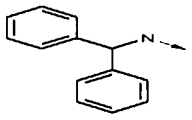
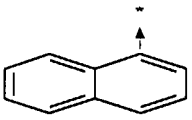
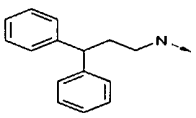
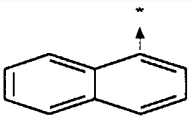
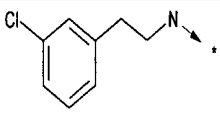
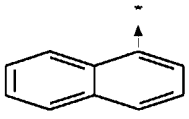
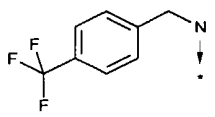
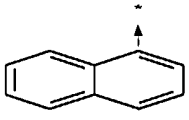
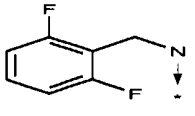
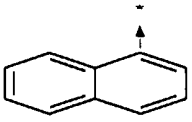
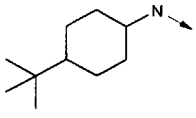
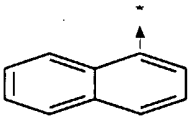
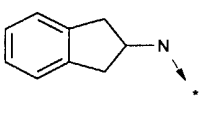


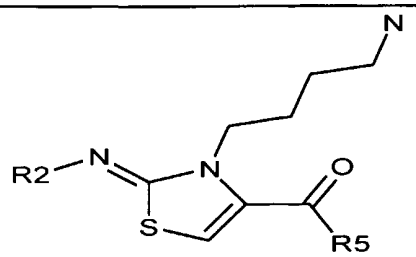
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1203			67,9	3,64	417,11
1204			31,7 + 17,3	4,65 + 4,8	429,24
1205			41,8	3,86	407,14
1206			67,8	4,58	487,20
1207			33,2	4,31	415,20
1208			60,9	3,29	438,21
1209			58	4,29	467,18
1210			51,9	4,21	429,15
1211			70	5,03	513,24
1212			22,9	3,17	441,19
1213			71,8	3,81	516,16

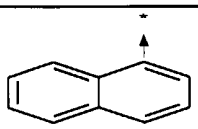
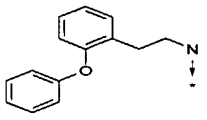
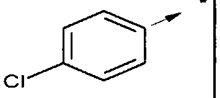
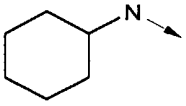
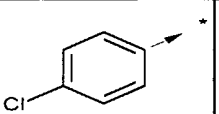
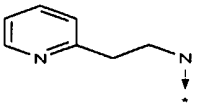
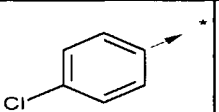
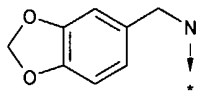
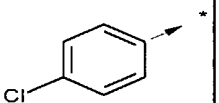
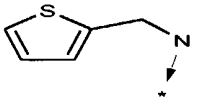
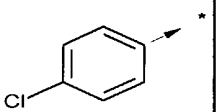
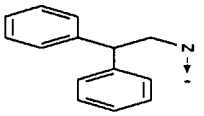
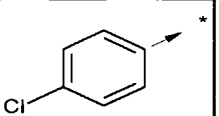
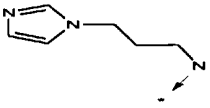
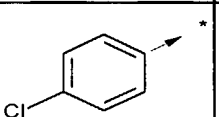
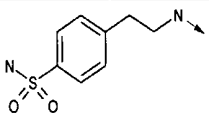
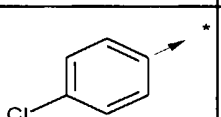
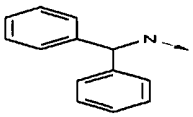
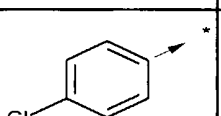
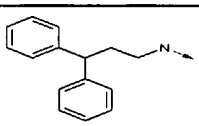
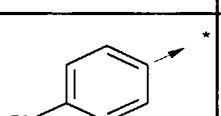
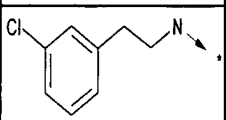


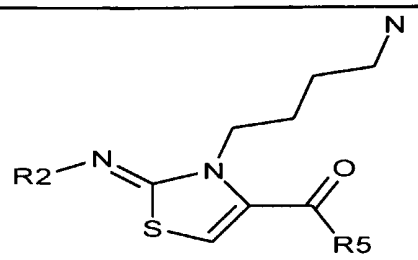
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1214			35,4	5,03	499,23
1215			64	5,18	527,25
1216			68,2	4,71	471,19
1217			76,5	4,84	491,18
1218			67,6	4,35	459,16
1219			28,7 + 14,2	5,27 + 5,4	471,30
1220			66,9	4,52	449,21
1221			64,1	5,17	529,21
1222			49,7	4,55	423,19
1223			78,8	3,41	446,17
1224			76,2	4,48	475,15

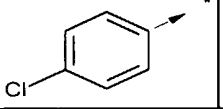
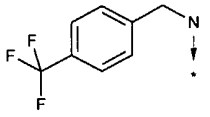
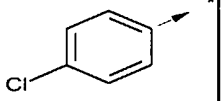
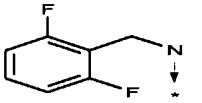
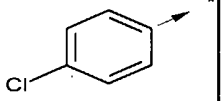
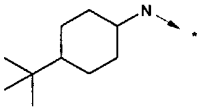
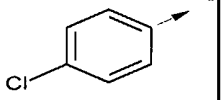
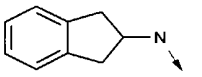
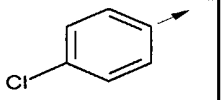
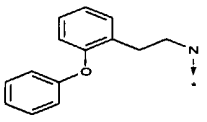
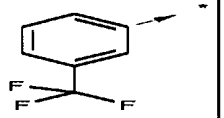
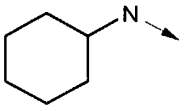
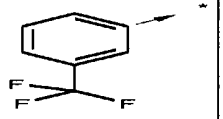
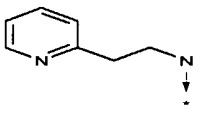
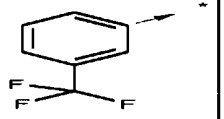
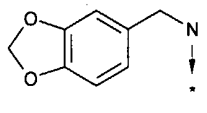
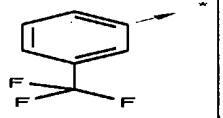
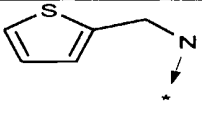
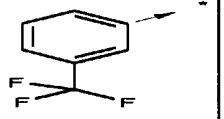
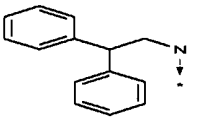
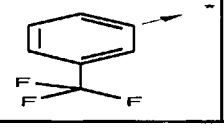
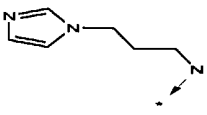


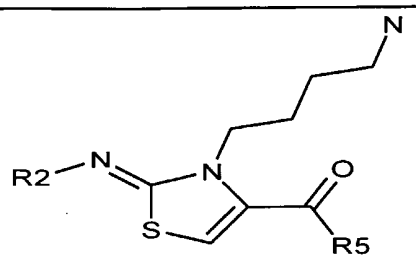
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1225			68,3	4,42	437,12
1226			79,6	5,24	521,17
1227			49,1	3,29	449,20
1228			72,2	4	524,15
1229			69,7	5,22	507,20
1230			75	5,42	535,20
1231			78	4,93	479,13
1232			79,1	5,04	499,16
1233			82,6	4,56	467,13
1234			45 + 24,6	5,53 + 5,7	479,26
1235			77	4,75	457,18

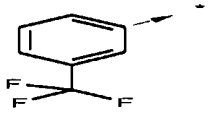
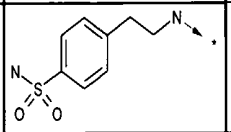
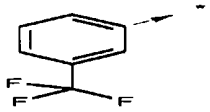
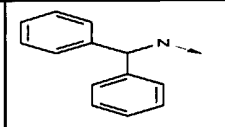
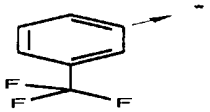
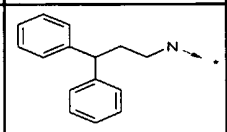
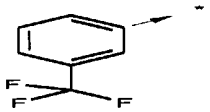
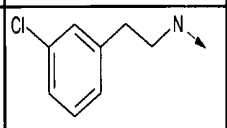
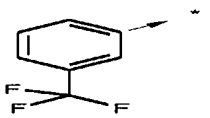
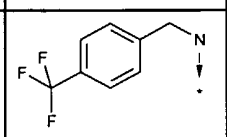
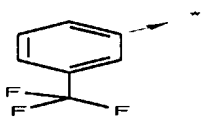
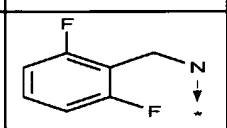
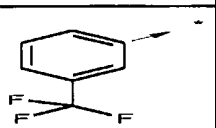
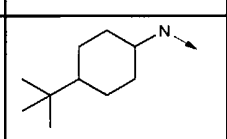
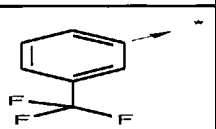
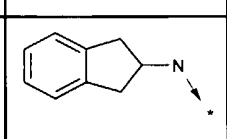
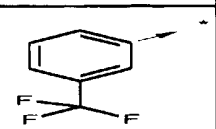
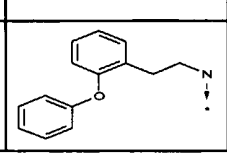


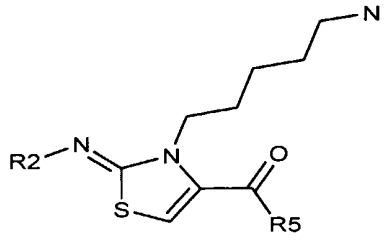
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1236			70,4	5,41	537,18
1237			47,7	4,38	407,12
1238			71,3	3,27	430,12
1239			70,2	4,35	459,10
1240			68,1	4,27	421,06
1241			78,8	5,13	505,13
1242			24	3,17	433,11
1243			74,2	3,86	508,08
1244			43	5,16	491,08
1245			71,8	5,38	519,12
1246			69,9	4,85	463,05

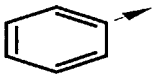
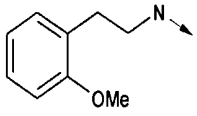
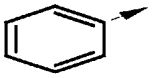
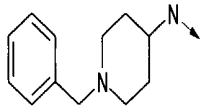
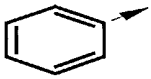
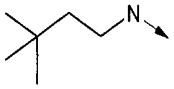
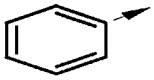
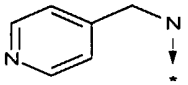
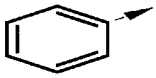
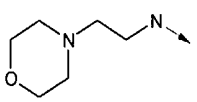
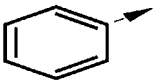
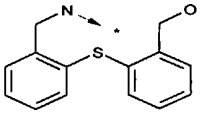
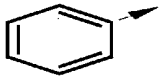
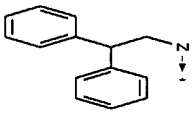
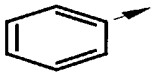
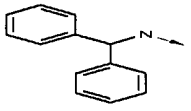
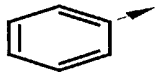
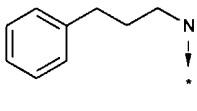
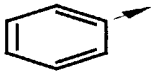
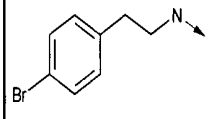
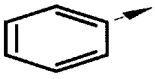
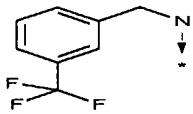


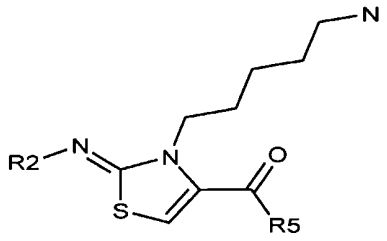
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1247			79,2	4,96	483,10
1248			77,9	4,45	451,07
1249			42,6 + 23,5	5,42 + 5,6	463,20
1250			70	4,65	441,11
1251			72	5,36	521,12
1252			28,2	4,96	441,14
1253			65,8	3,69	464,14
1254			51	4,86	493,14
1255			64,5	4,79	455,08
1256			72,2	5,55	539,16
1257			27,2	3,59	467,16

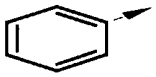
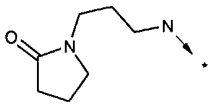
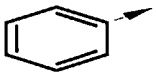
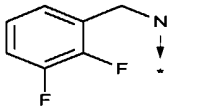
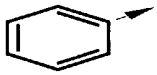
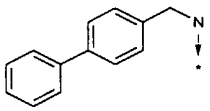
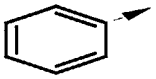
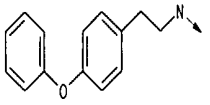
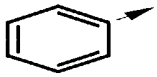
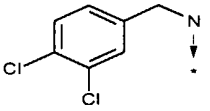
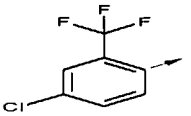
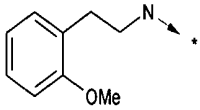
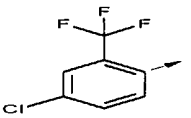
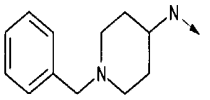
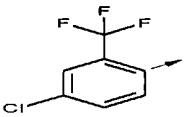
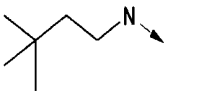
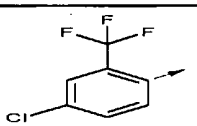
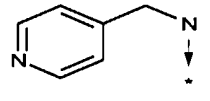
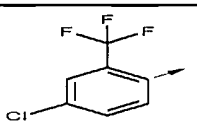
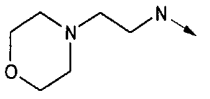
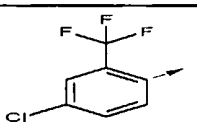
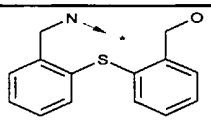


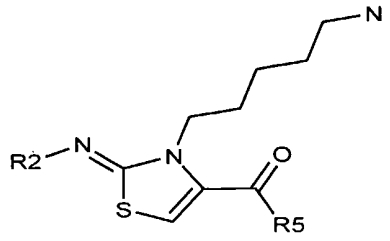
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1258			38,6	4,38	542,12
1259			49,4	5,53	525,16
1260			60,6	5,73	553,20
1261			67,7	5,27	497,13
1262			80,8	5,34	517,12
1263			78	4,92	485,13
1264			28,5 + 14,4	5,87 + 6,0	497,26
1265			60,5	5,13	475,16
1266			65,7	5,73	555,14

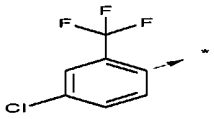
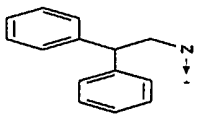
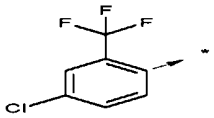
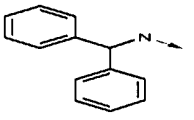
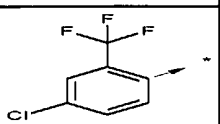
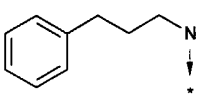
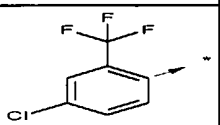
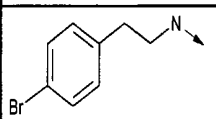
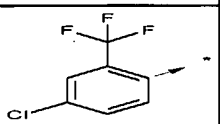
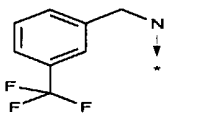
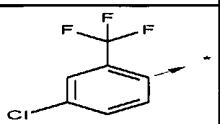
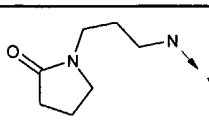
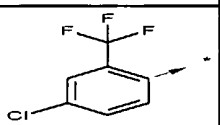
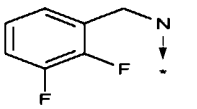
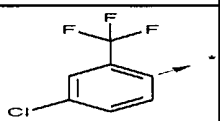
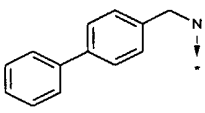
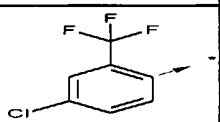
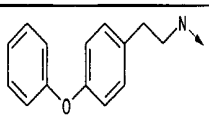
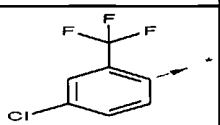
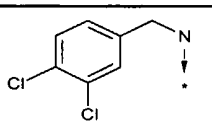
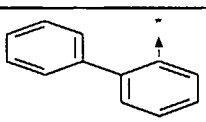
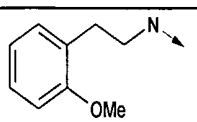


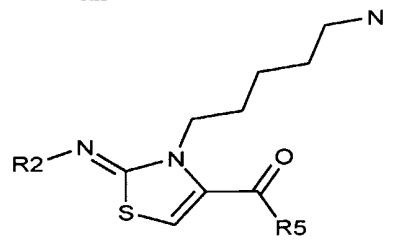
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1267			60	3,86	439,18
1268			88,1	2,89	478,24
1269			89,1	3,83	389,20
1270			94,3	2,41	396,14
1271			94	2,33	418,20
1272			80,3	4,05	533,17
1273			93	4,33	485,23
1274			90,5	4,27	471,22
1275			82,4	3,94	423,20
1276			92,8	4,07	487,10
1277			92,3	4,09	463,16

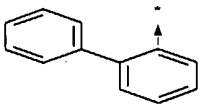
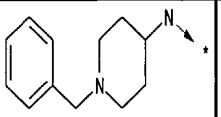
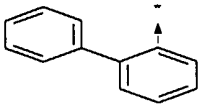
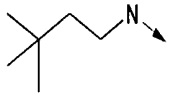
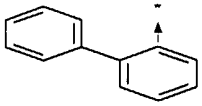
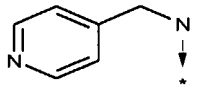
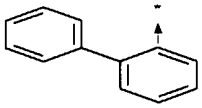
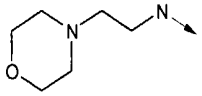
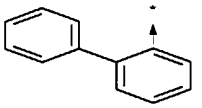
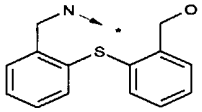
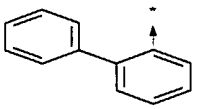
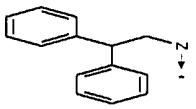
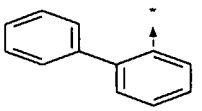
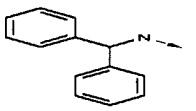
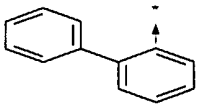
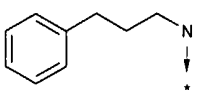
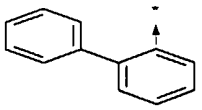
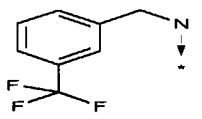
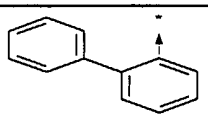
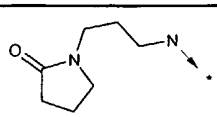
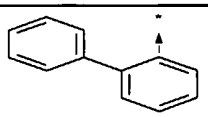
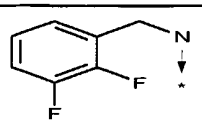


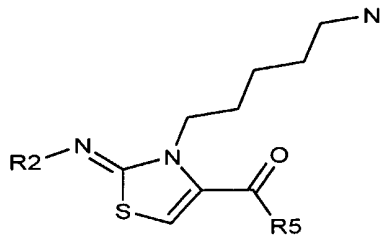
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1278			90,6	2,9	430,20
1279			94,7	3,69	431,14
1280			90,6	4,37	471,21
1281			86,4	4,51	501,20
1282			93,1	4,16	463,09
1283			63,6	5,58	541,11
1284			82,4	4,23	580,17
1285			87,6	5,63	491,16
1286			91,5	4,03	498,13
1287			89,5	3,91	520,13
1288			82,2	5,61	635,14

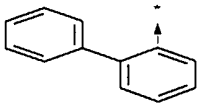
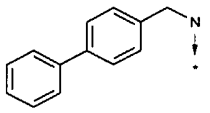
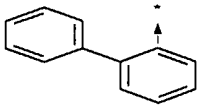
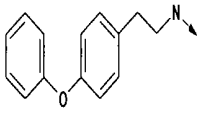
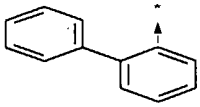
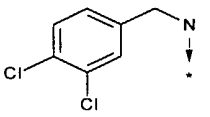
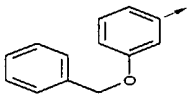
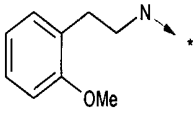
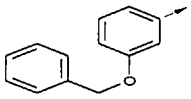
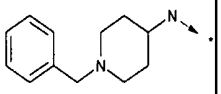
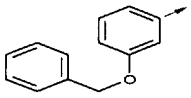
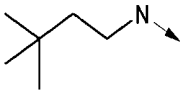
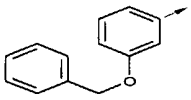
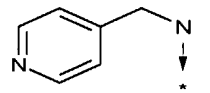
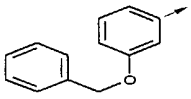
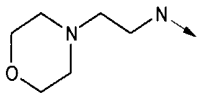
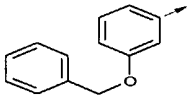
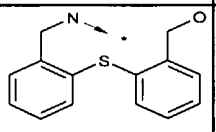
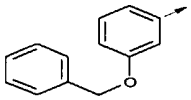
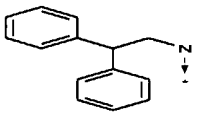
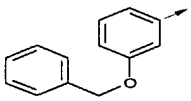
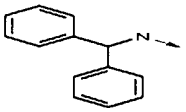


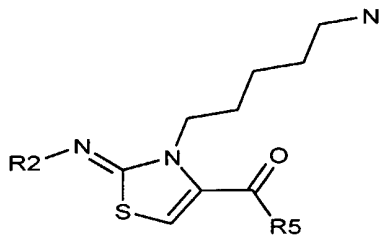
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1289			92,3	5,9	587,14
1290			89,9	5,86	573,11
1291			90	5,66	525,14
1292			90,9	5,73	589,02
1293			91,2	5,69	565,07
1294			89,4	4,72	532,13
1295			93,3	5,44	533,08
1296			93,1	5,95	573,11
1297			90,1	6,06	603,16
1298			90,3	5,79	565,00
1299			63,6	4,65	515,20

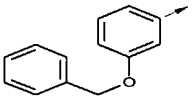
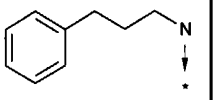
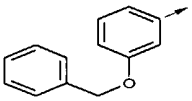
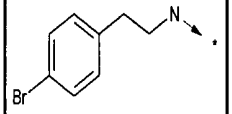
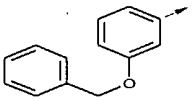
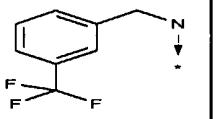
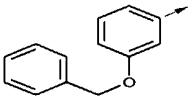
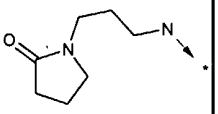
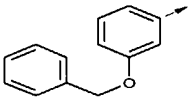
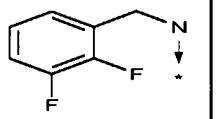
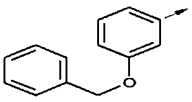
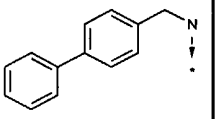
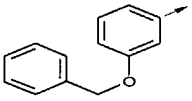
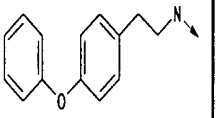
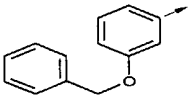
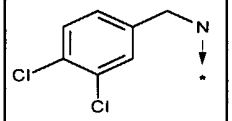
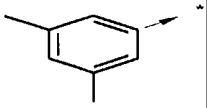
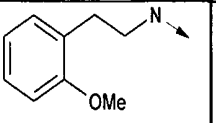
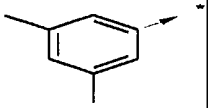
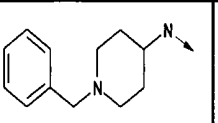
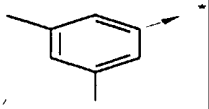
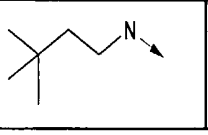


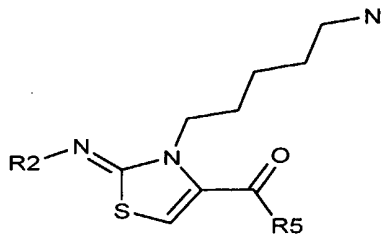
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1300			82,9	3,63	554,24
1301			85,9	4,67	465,23
1302			85,4	3,41	472,20
1303			83,7	3,31	494,23
1304			84,2	4,79	609,20
1305			86,5	5,11	561,20
1306			84,2	5,11	547,19
1307			84,8	4,75	499,23
1308			89	4,89	539,15
1309			85,9	3,76	506,23
1310			88,5	4,59	507,17

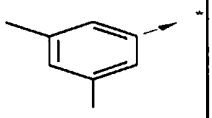
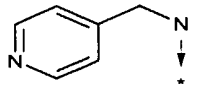
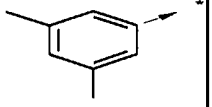
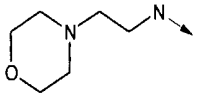
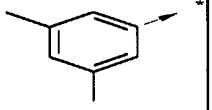
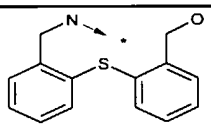
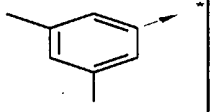
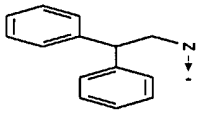
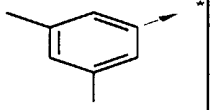
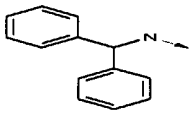
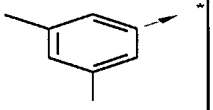
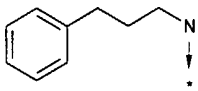
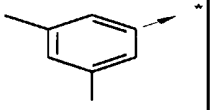
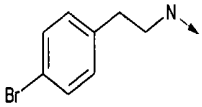
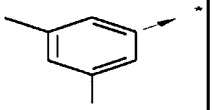
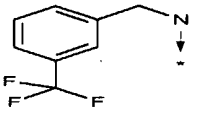
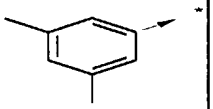
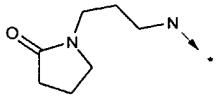
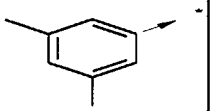
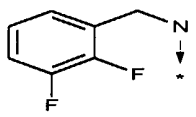
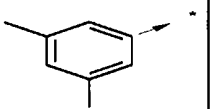
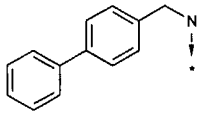


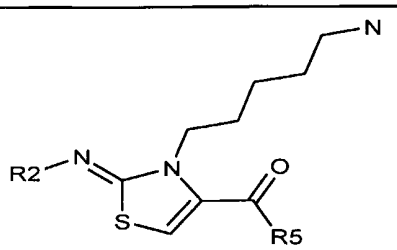
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1311			87,8	5,16	547,20
1312			1,5	5,6	577,22
1313			89,7	4,99	539,10
1314			65,3	4,81	545,20
1315			86,7	3,82	584,25
1316			87,6	4,81	495,24
1317			91	3,63	502,20
1318			90,2	3,54	524,24
1319			85,4	4,91	639,22
1320			85,7	5,21	591,23
1321			90	5,19	577,22

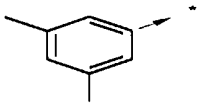
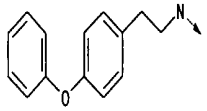
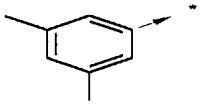
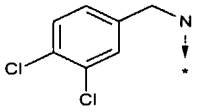


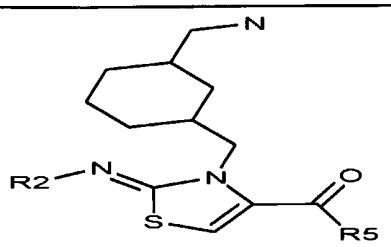
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
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1323			86,4	5	593,12
1324			87,5	5,01	569,16
1325			89,7	4	536,23
1326			89,6	4,73	537,18
1327			89,6	5,24	577,24
1328			86,7	5,33	607,24
1329			90,6	5,1	569,10
1330			62,1	4,17	467,23
1331			92,8	3,23	506,28
1332			81,3	4,14	417,24

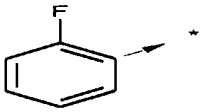
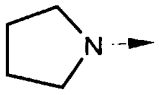
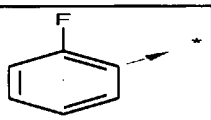
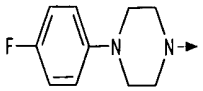
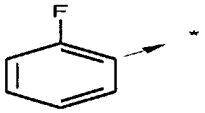
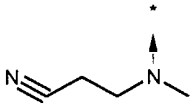
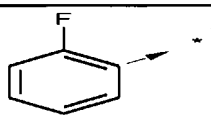
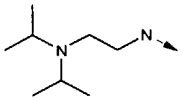
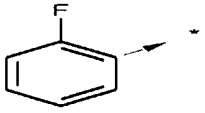
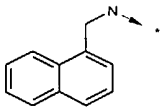
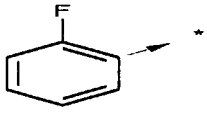
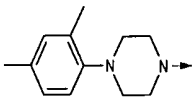
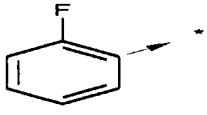
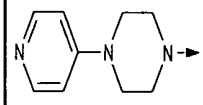
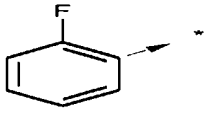
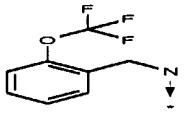
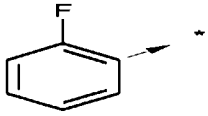
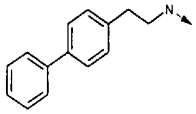
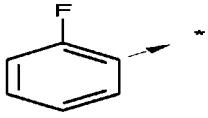
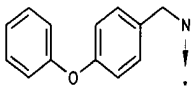
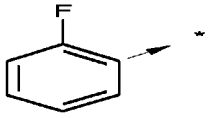
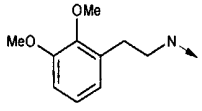


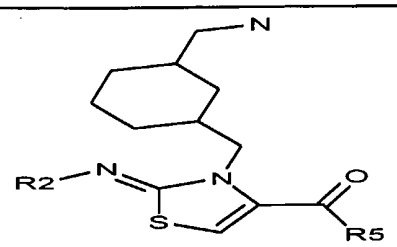
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1333			91,9	2,95	424,19
1334			91,8	2,87	446,24
1335			78,7	4,31	561,19
1336			89,5	4,58	513,25
1337			91,3	4,54	499,24
1338			80,3	4,24	451,23
1339			77,6	4,37	515,12
1340			85,7	4,37	491,18
1341			92,3	3,34	458,25
1342			90,8	4,05	459,19
1343			79,9	4,63	499,25

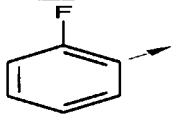
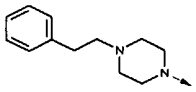
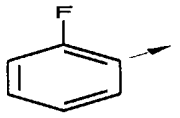
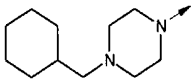
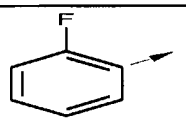
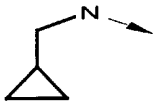
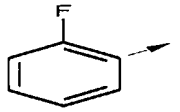
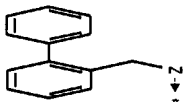
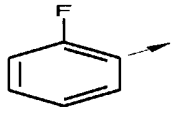
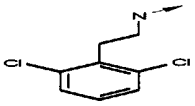
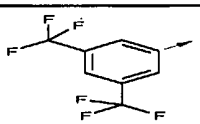
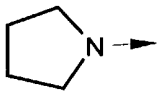
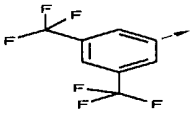
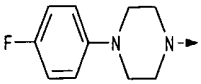
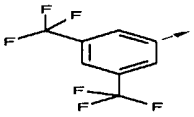
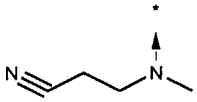
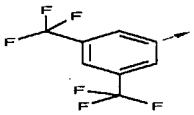
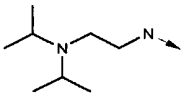
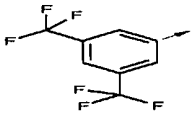
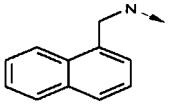
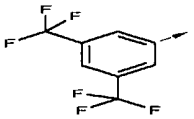
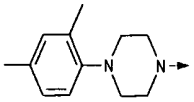


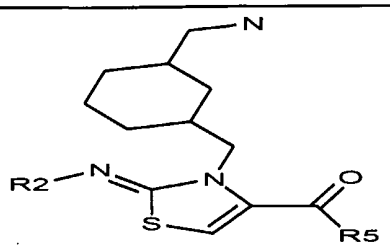
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
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1345			91,9	4,45	491,13

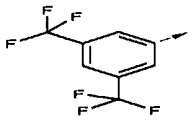
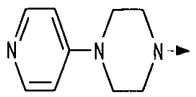
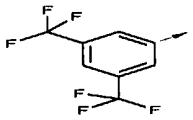
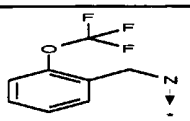
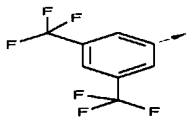
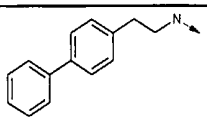
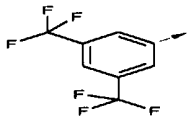
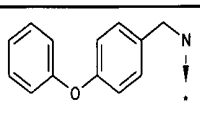
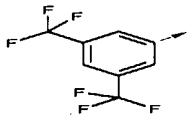
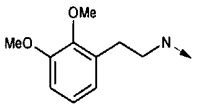
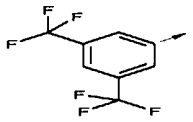
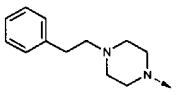
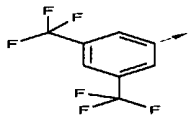
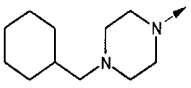
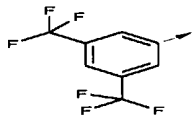
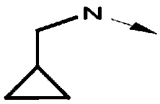
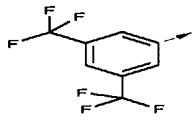
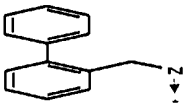
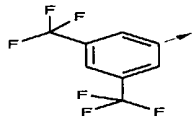
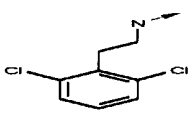
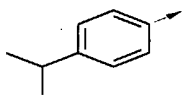
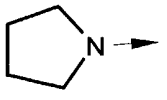


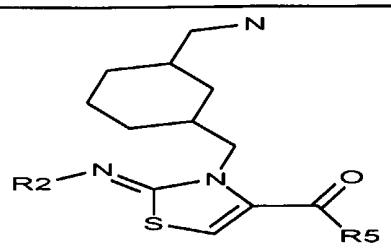
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1346			56,9 + 24,5	4,07 + 4,2	417,23
1347			64,6 + 24,4	4,98 + 5,1	526,30
1348			62,4 + 25,1	3,96 + 4,1	430,25
1349			80,5	3,44	490,37
1350			65,4 + 27,8	4,9 + 5,0	503,31
1351			64,5 + 25,5	5,6 + 5,7	536,35
1352			86,8	3,3	509,30
1353			64,1 + 29,8	5,02 + 5,1	537,26
1354			60,8 + 32,2	5,37 + 5,5	543,32
1355			59,6 + 31,5	5,24 + 5,3	545,30
1356			61,6 + 24,8	4,69 + 4,8	527,31

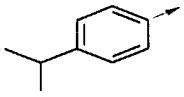
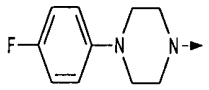
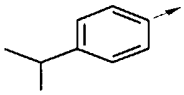
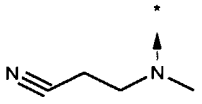
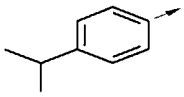
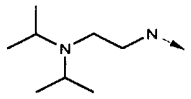
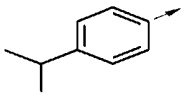
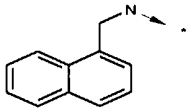
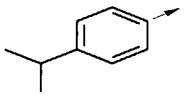
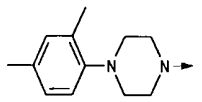
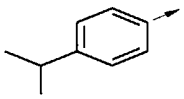
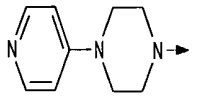
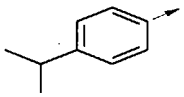
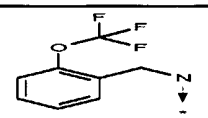
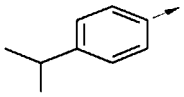
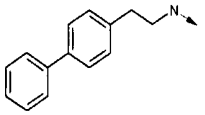
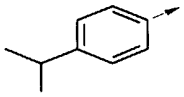
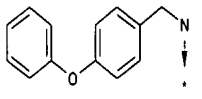
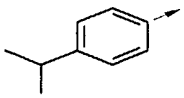
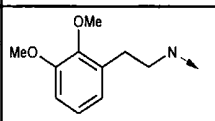
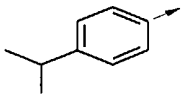
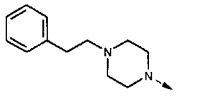


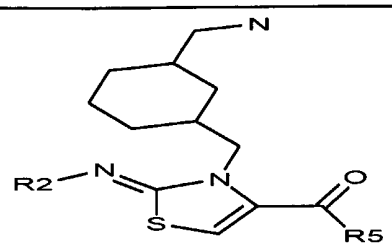
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1357			88,7	3,8	536,36
1358			87,5	3,8	528,38
1359			58 + 25,2	4,12 + 4,3	417,27
1360			68,1 + 24,5	5,22 + 5,3	529,31
1361			64,8 + 23,1	5,12 + 5,2	535,19
1362			61,9 + 21,6	5,46 + 5,5	535,23
1363			90,4	6,06	644,33
1364			89,7	5,31	548,24
1365			84,3	4,5	608,34
1366			95,2	6,06	621,27
1367			90,9	6,6	654,4

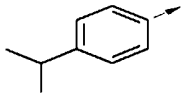
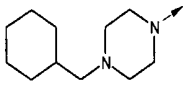
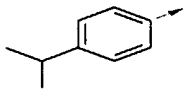
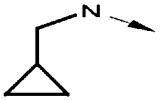
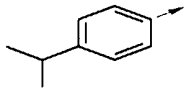
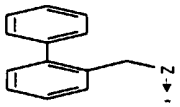
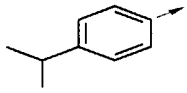
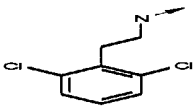
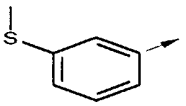
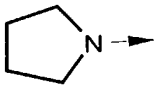
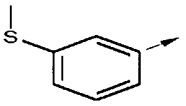
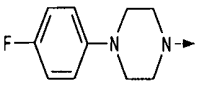
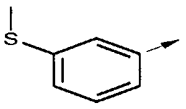
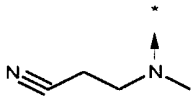
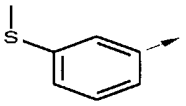
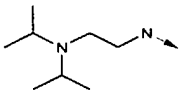
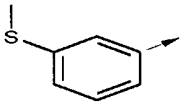
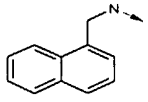
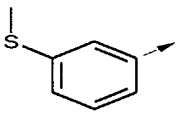
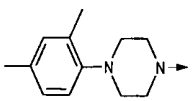
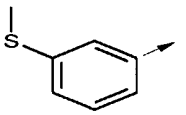
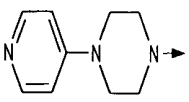


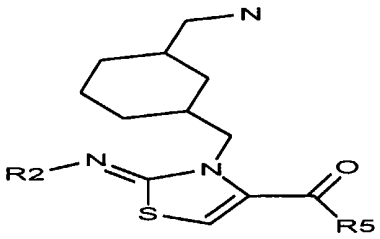
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1368			84,2	4,41	627,29
1369			92,8	6,12	655,27
1370			91,9	6,4	661,33
1371			93,2	6,3	663,32
1372			87,3	5,9	645,32
1373			87,5	4,7	654,4
1374			84,8	4,7	646,38
1375			71,8	5,53	535,23
1376			94,2	6,28	647,32
1377			91,6	6,25	653,22
1378			63 + 26,1	3,98 + 4,2	441,30

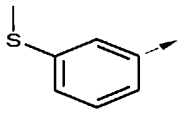
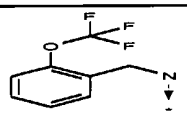
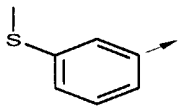
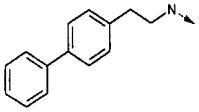
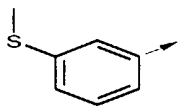
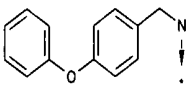
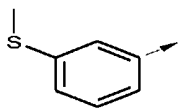
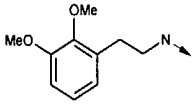
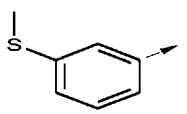
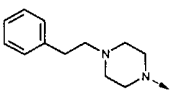
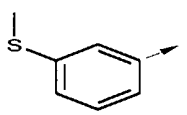
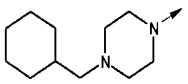
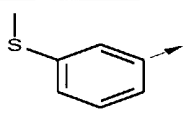
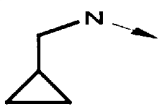
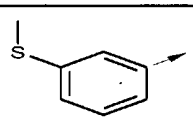
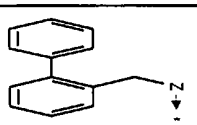
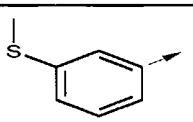
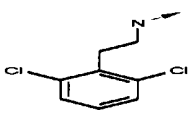
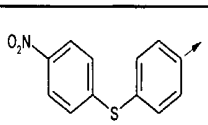
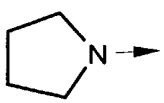
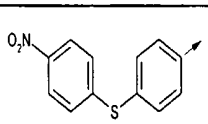
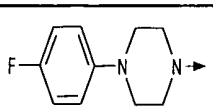


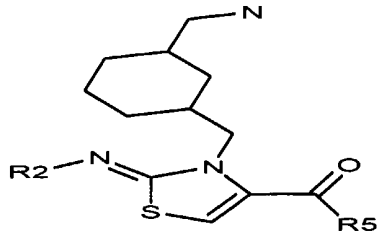
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1379			64,5 + 28	4,8 + 5,0	550,36
1380			65,1 + 26,9	3,93 + 4,1	454,30
1381			56,6 + 30,1	3,54 + 3,6	514,40
1382			64,8 + 30,3	4,64 + 4,9	527,34
1383			64,3 + 28,3	5,33 + 5,6	560,39
1384			64,5 + 24,8	3,5 + 3,6	533,35
1385			62,9 + 27,5	4,77 + 5,0	561,29
1386			48,5 + 20,8	5,08 + 5,3	567,36
1387			61,2 + 27,5	4,98 + 5,2	569,33
1388			58,4 + 22,7	4,5 + 4,7	551,36
1389			65,1 + 26,4	3,92 + 4,0	560,38

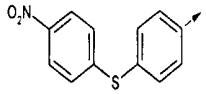
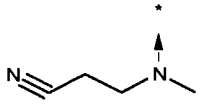
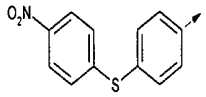
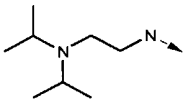
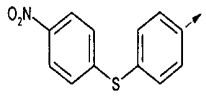
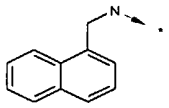
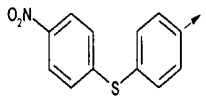
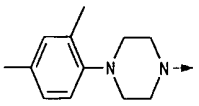
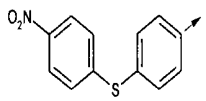
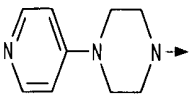
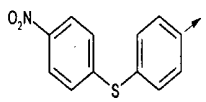
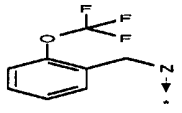
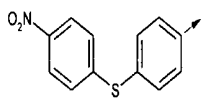
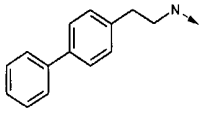
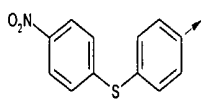
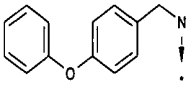
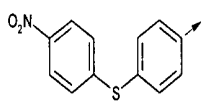
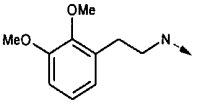
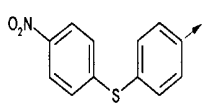
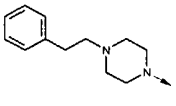
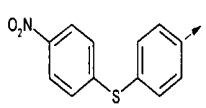
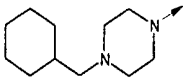


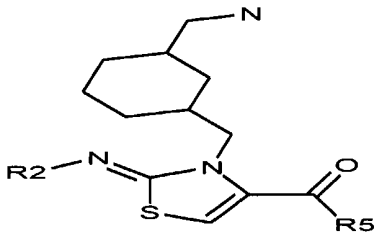
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1390			63,6 + 26,1	3,92 + 4,1	552,43
1391			64 + 27,3	4,01 + 4,2	441,30
1392			66,2 + 28,9	4,96 + 5,2	553,35
1393			62,8 + 26,6	4,84 + 5,0	559,23
1394			59,4 + 26,3	3,95 + 4,1	445,26
1395			63,7 + 28,7	4,89 + 5,1	554,28
1396			62 + 27,9	3,9 + 4,1	458,27
1397			58,9 + 28,7	3,48 + 3,5	518,35
1398			62,9 + 29,3	4,75 + 5,0	531,28
1399			63,2 + 28,4	5,46 + 5,7	564,32
1400			58,3 + 30,4	3,39 + 3,5	537,30

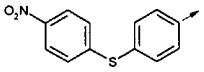
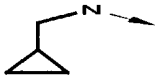
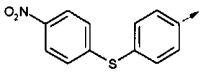
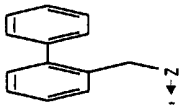
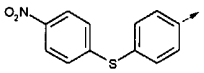
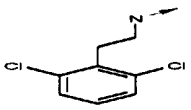


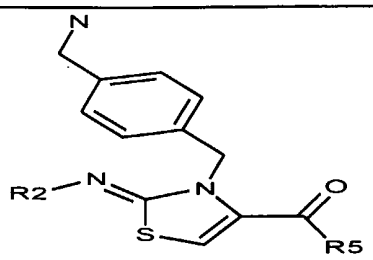
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1401			61,8 + 28,3	4,88 + 5,0	565,23
1402			61,5 + 27,9	5,2 + 5,4	571,28
1403			62,2 + 29,5	5,09 + 5,3	573,28
1404			60,6 + 26,7	4,54 + 4,7	555,30
1405			59,2 + 31,8	3,86 + 4,0	564,32
1406			59,3 + 31,2	3,86 + 4,0	556,37
1407			49,3 + 21,7	4 + 4,2	445,26
1408			64,4 + 29,7	5,07 + 5,3	557,28
1409			61,7 + 27,9	4,96 + 5,1	563,20
1410			62,4 + 25,4	5,24 + 5,4	552,27
1411			63,6 + 28,1	5,91 + 6,0	661,33

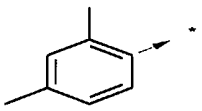
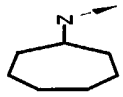
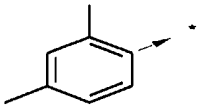
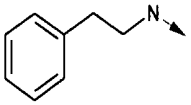
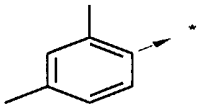
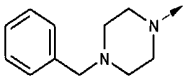
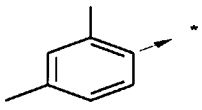
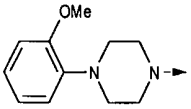
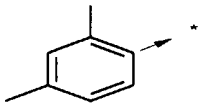
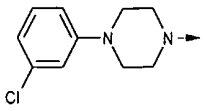
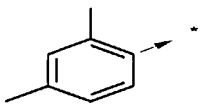
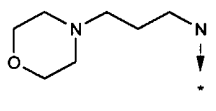
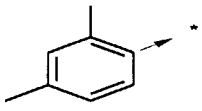
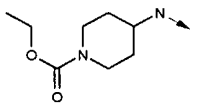
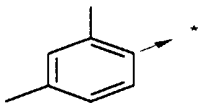
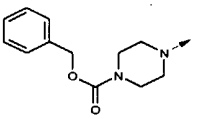
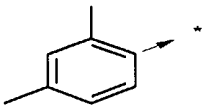
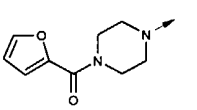
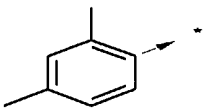
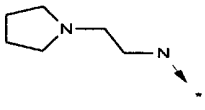
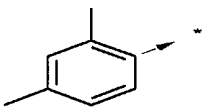
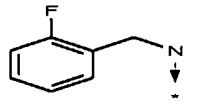


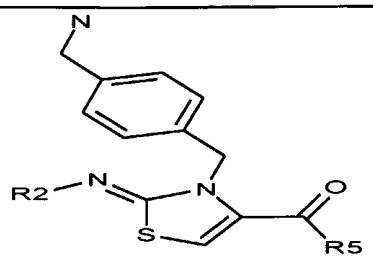
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1412			60,5 + 30,2	5,14 + 5,2	565,25
1413			87,2	4,43	625,36
1414			60,9 + 31,9	5,88 + 6,0	638,30
1415			61,1 + 31,2	6,47 + 6,6	671,37
1416			89,3	4,34	644,35
1417			66,6 + 25,7	5,96 + 6,0	672,28
1418			65,1 + 25,4	6,25 + 6,3	678,35
1419			63 + 27,5	6,13 + 6,2	680,32
1420			54,7 + 29,8	5,75 + 5,8	662,33
1421			91,7	4,71	671,38
1422			89,3	4,72	663,41

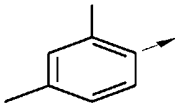
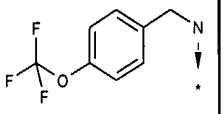
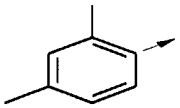
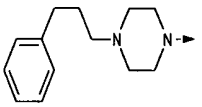
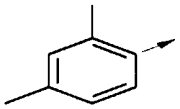
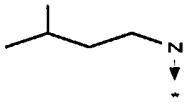
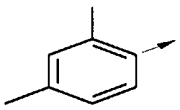
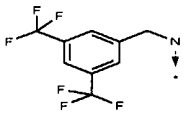
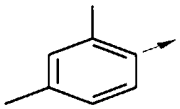
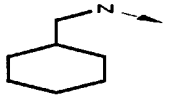
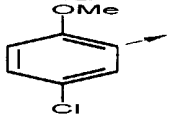
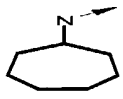
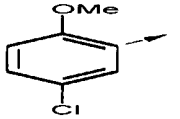
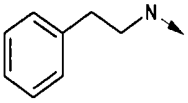
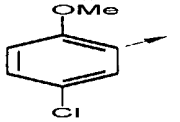
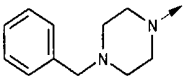
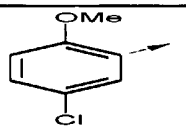
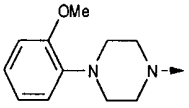
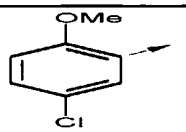
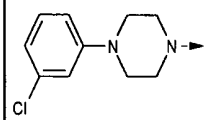
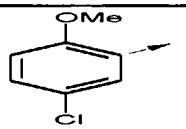
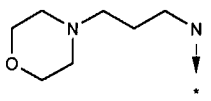


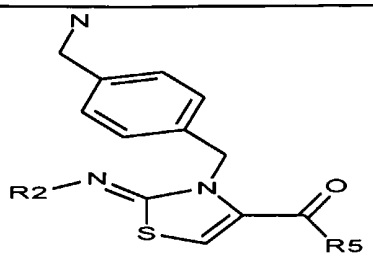
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1423			49 + 23,9	5,34 + 5,4	552,26
1424			64,1 + 27,2	6,18 + 6,2	664,34
1425			62,3 + 27,3	6,13 + 6,2	670,25

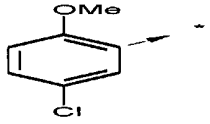
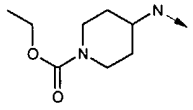
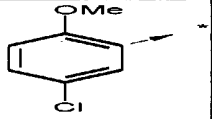
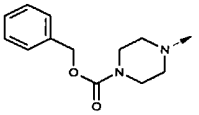
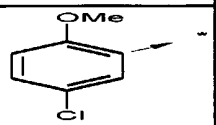
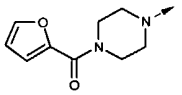
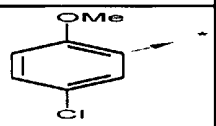
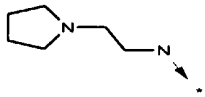
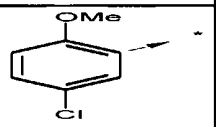
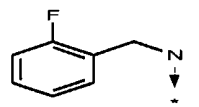
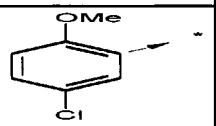
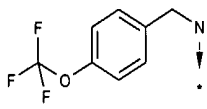
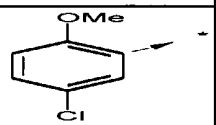
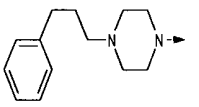
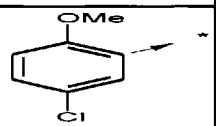
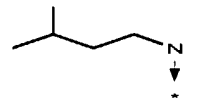
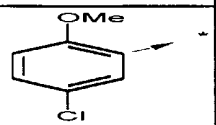
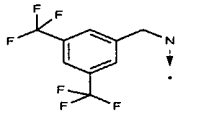
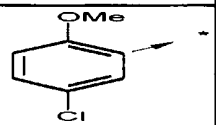
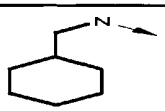
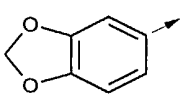
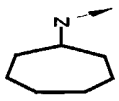


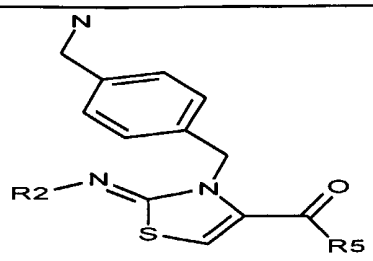
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1426			78,4	4,58	463,27
1427			53,4	4,48	471,23
1428			86,2	3,67	526,29
1429			86	4,58	542,25
1430			84,9	4,98	546,21
1431			42,9	3,26	494,27
1432			84,4	4,14	522,26
1433			83,2	4,72	570,25
1434			87,1	4,04	530,22
1435			45,6	3,16	464,25
1436			85,6	4,4	475,20

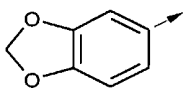
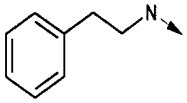
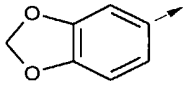
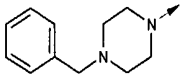
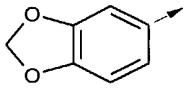
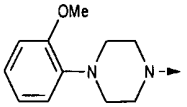
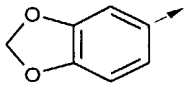
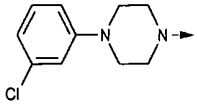
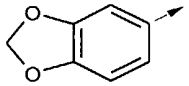
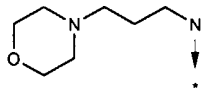
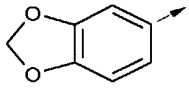
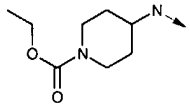
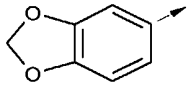
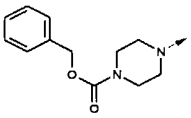
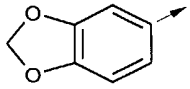
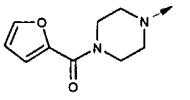
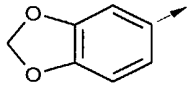
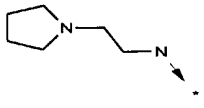
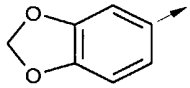
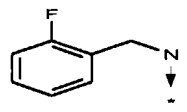
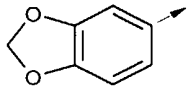
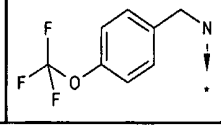


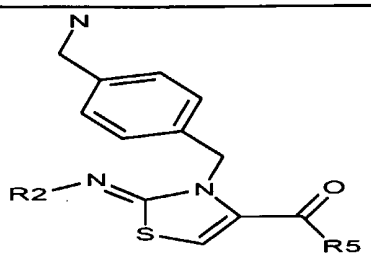
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1437			84,2	4,96	541,18
1438			87,2	3,88	554,28
1439			84,5	4,39	437,23
1440			33,8	5,34	593,17
1441			9,5	4,7	463,24
1442			78,8	5,11	499,20
1443			46,9	4,98	507,17
1444			87,9	3,88	562,19
1445			85,6	4,95	578,19
1446			84,9	5,3	582,14
1447			49	3,45	530,19

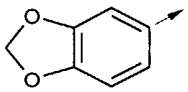
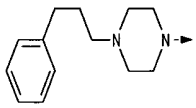
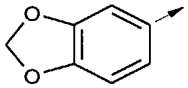
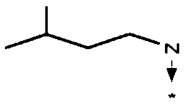
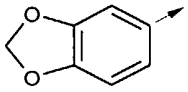
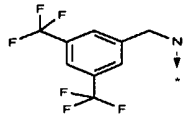
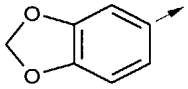
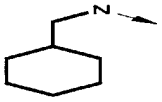
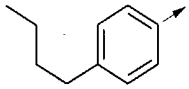
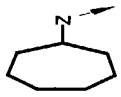
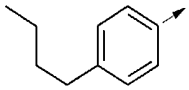
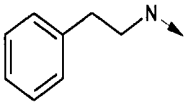
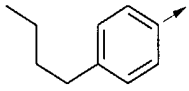
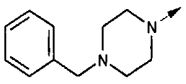
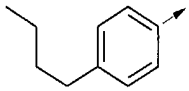
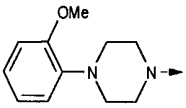
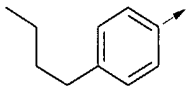
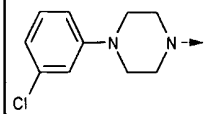
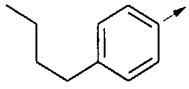
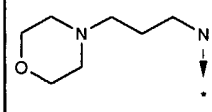
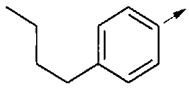
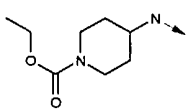


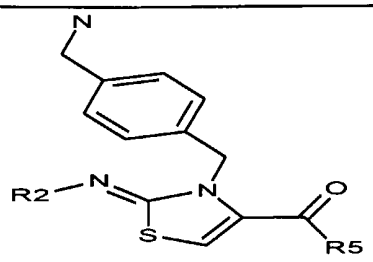
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1448			81,4	4,62	558,18
1449			83	5,06	606,20
1450			84,9	4,42	566,15
1451			40,7	3,5	500,19
1452			85,1	4,87	511,13
1453			87,4	5,33	577,13
1454			85,6	4,08	590,24
1455			54,9	4,92	473,21
1456			43	5,66	629,13
1457			17,2	5,2	499,20
1458			77,6	4,3	479,20

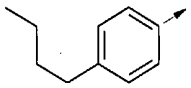
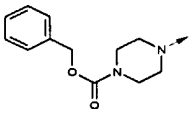
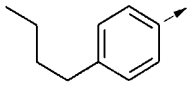
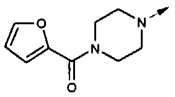
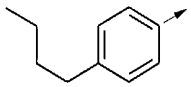
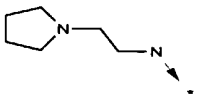
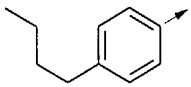
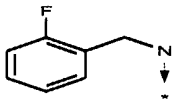
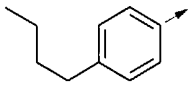
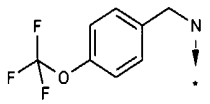
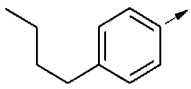
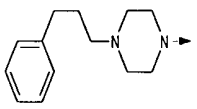
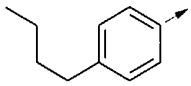
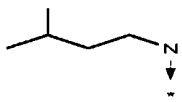
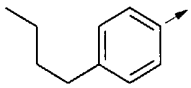
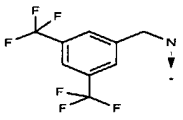
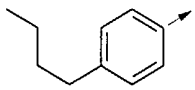
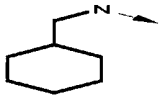
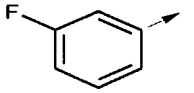
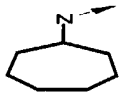
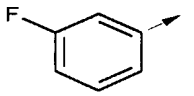
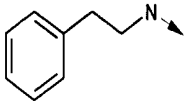


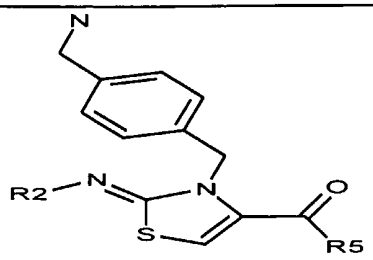
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1459			55,3	4,2	487,18
1460			85,2	3,32	542,22
1461			87	4,22	558,19
1462			85,9	4,64	562,14
1463			82,9	2,74	510,23
1464			81,6	3,84	538,20
1465			84,1	4,41	586,21
1466			85,5	3,66	546,16
1467			49,3	2,8	480,20
1468			81,7	4,11	491,15
1469			83,7	4,71	557,14

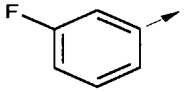
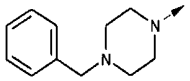
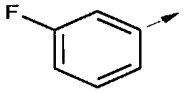
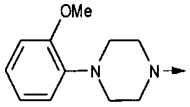
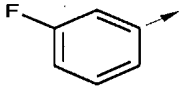
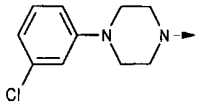
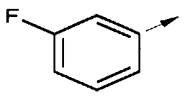
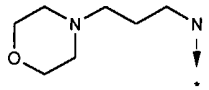
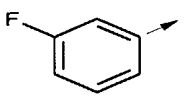
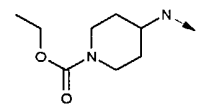
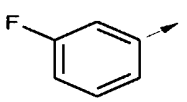
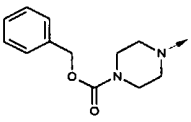
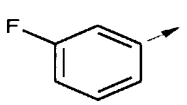
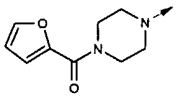
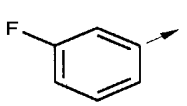
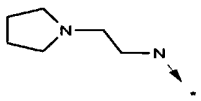
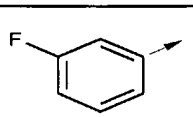
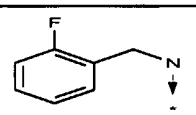
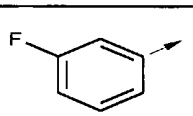
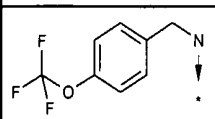
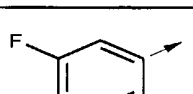
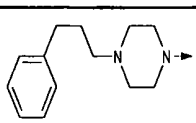


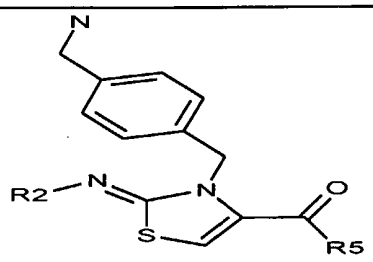
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1470			82,2	3,59	570,24
1471			66,1	4,11	453,19
1472			29,5	5,12	609,14
1473			9,9	4,44	479,20
1474			82,8	5,36	491,28
1475			58,2	5,29	499,26
1476			86,5	4,37	554,27
1477			86,6	5,33	570,26
1478			84,1	5,67	574,20
1479			70,3	3,89	522,29
1480			84,2	4,94	550,28

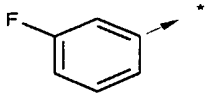
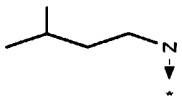
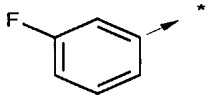
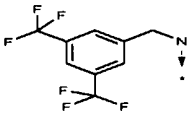
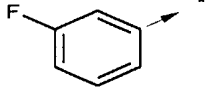
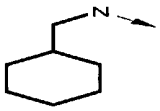


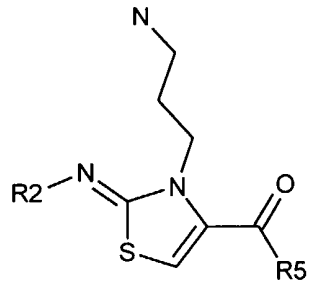
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1481			84,5	5,44	598,26
1482			86	4,84	558,24
1483			50,1	3,93	492,29
1484			82,5	5,23	503,25
1485			79,3	5,68	569,19
1486			87,3	4,51	582,31
1487			79,7	5,22	465,25
1488			26,1	6,06	621,20
1489			16,1	5,51	491,28
1490			77	5,02	453,22
1491			48,4	4,88	461,16

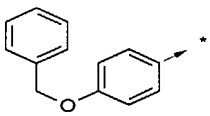
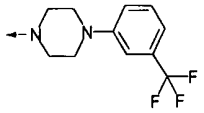
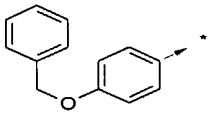
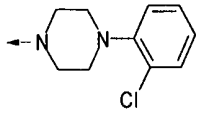
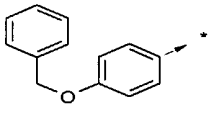
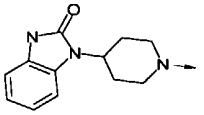
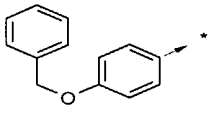
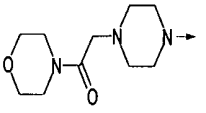
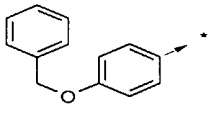
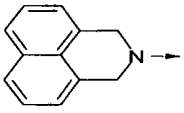
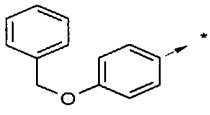
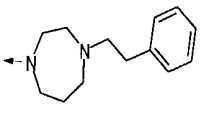
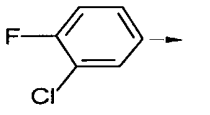
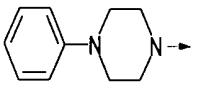
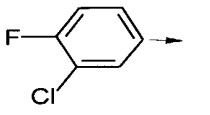
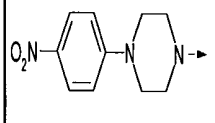
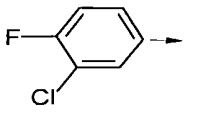
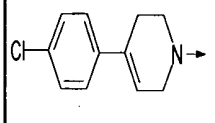
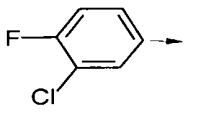
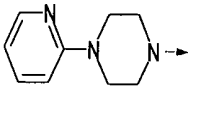
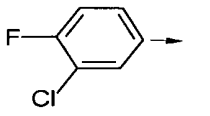
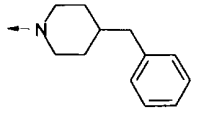


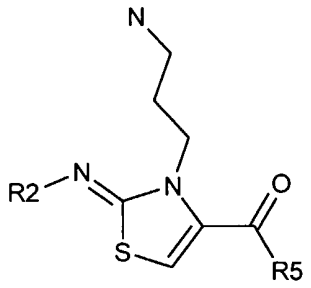
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1492			83,3	3,74	516,22
1493			84,6	4,85	532,2
1494			84,4	5,23	536,15
1495			69,9	3,29	484,23
1496			79,5	4,51	512,22
1497			81,9	4,96	560,17
1498			85,5	4,29	520,16
1499			67,7	3,32	454,19
1500			82,7	4,78	465,14
1501			82,1	5,26	531,13
1502			84,8	3,95	544,22

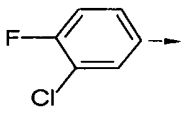
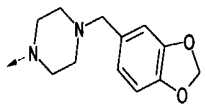
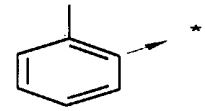
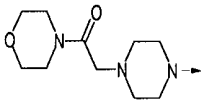
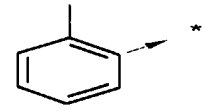
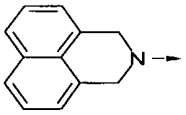
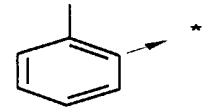
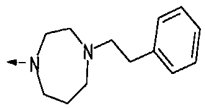


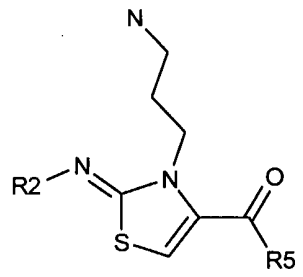
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
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1504			24	5,6	583,11
1505			17,7	5,12	453,21

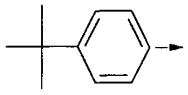
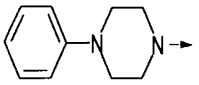
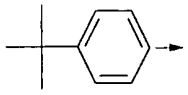
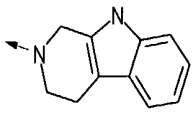
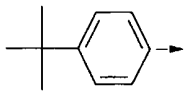
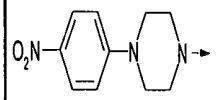
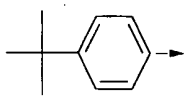
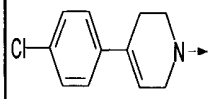
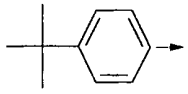
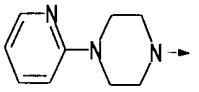
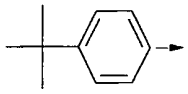
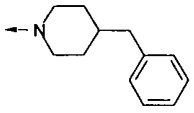
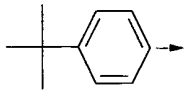
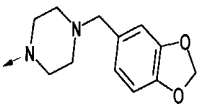
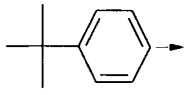
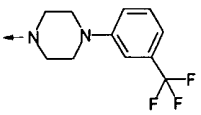
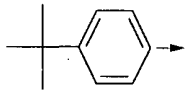
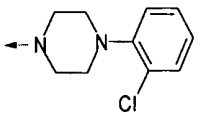
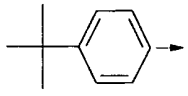
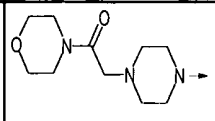
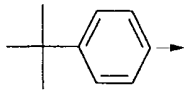
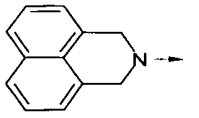


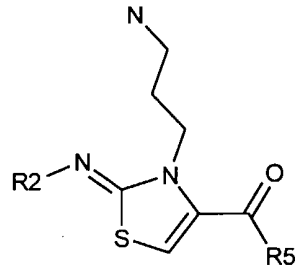
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1506			89,7	5,52	596,26
1507			87,2	5,37	562,23
1508			77	4,62	583,26
1509			89,1	3,7	579,25
1510			88,6	5,32	535,23
1511			87,6	4	570,27
1512			88	5,12	474,19
1513			90,5	5,09	519,14
1514			91,2	5,7	505,1
1515			88	3,74	475,17
1516			86,7	5,58	487,20

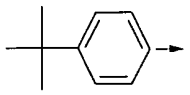
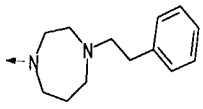
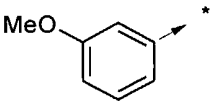
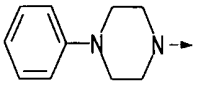
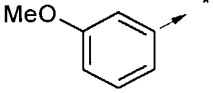
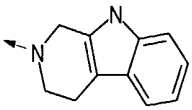
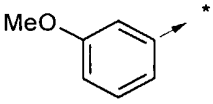
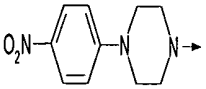
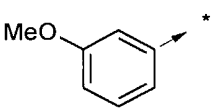
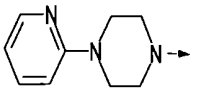
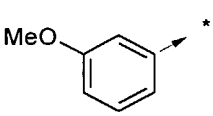
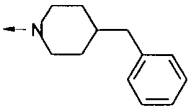
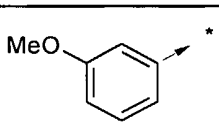
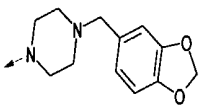
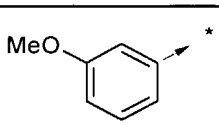
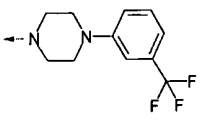
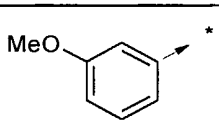
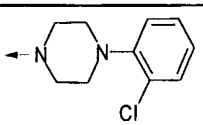
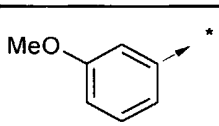
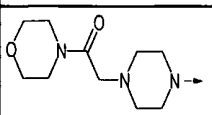
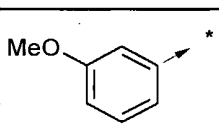
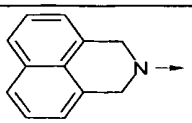


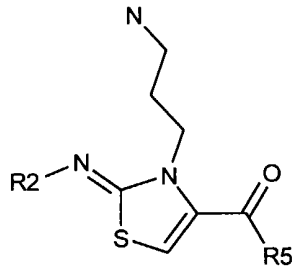
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1517			88,3	3,88	532,18
1518			90,4	3	487,27
1519			92,8	4,86	443,21
1520			87,8	3,58	478,28

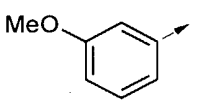
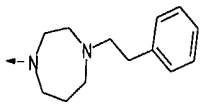


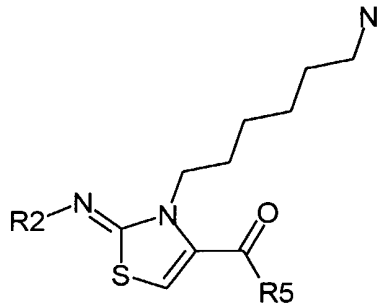
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1521			90,4	5,2	478,28
1522			79,8	5,37	488,26
1523			90,3	5,13	523,27
1524			81,2	5,7	509,2
1525			91	3,88	479,26
1526			91,5	5,62	491,29
1527			91,1	4,1	536,28
1528			91,9	5,68	546,25
1529			92	5,54	512,24
1530			91,4	3,7	529,3
1531			92,4	5,49	485,23

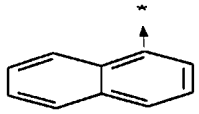
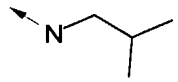
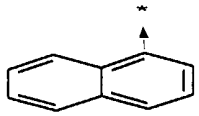
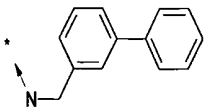
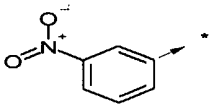
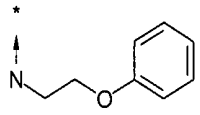
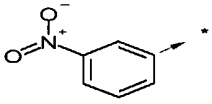
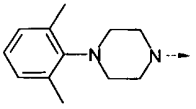
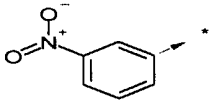
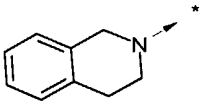
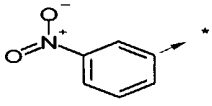
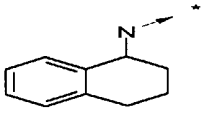
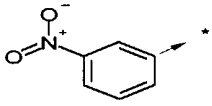
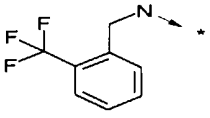
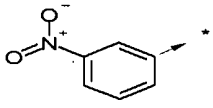
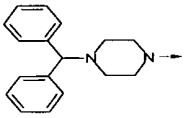
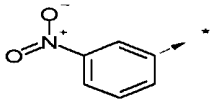
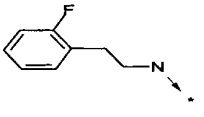
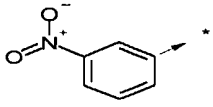
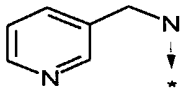
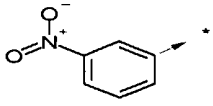
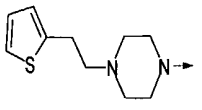


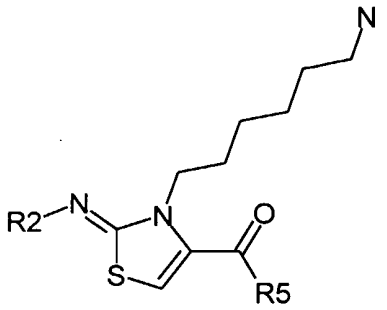
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1532			89,4	4,2	520,28
1533			90,1	4,56	452,20
1534			76,8	4,76	462,18
1535			92,5	4,58	497,22
1536			93,4	3,21	453,21
1537			91,2	5,04	465,22
1538			92,7	3,44	510,22
1539			89,6	5,14	520,18
1540			90,2	4,93	486,17
1541			89,4	2,98	503,26
1542			90,9	4,84	459,18

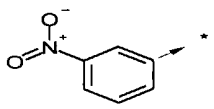
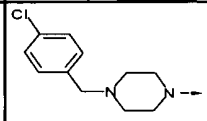
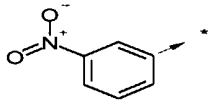
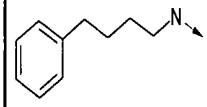
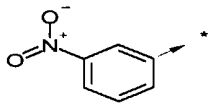
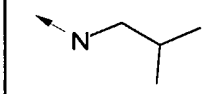
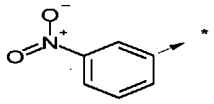
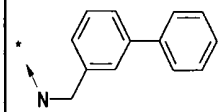
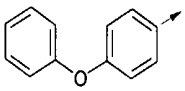
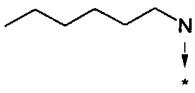
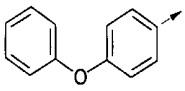
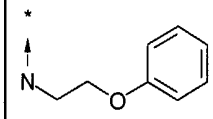
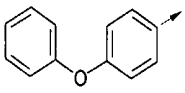
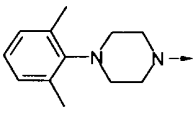
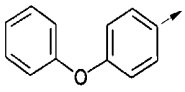
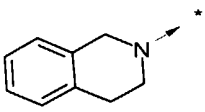
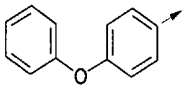
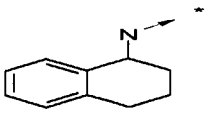
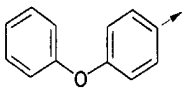
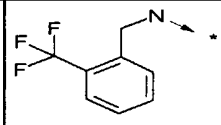
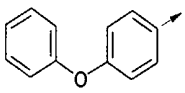
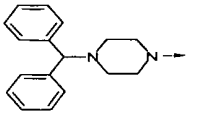


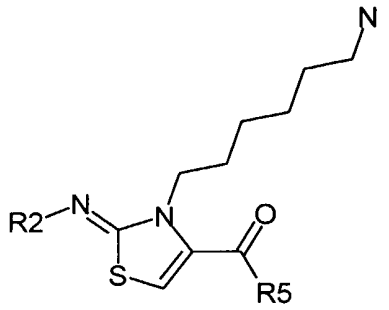
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1543			89,1	3,55	494,26

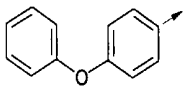
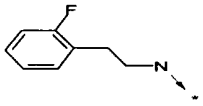
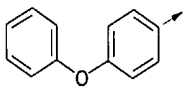
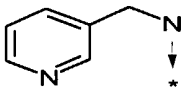
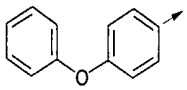
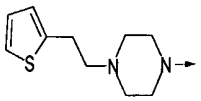
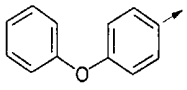
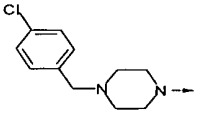
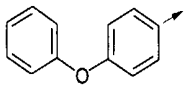
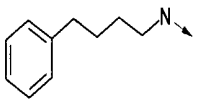
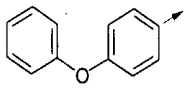
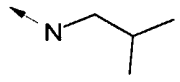
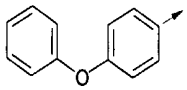
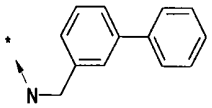
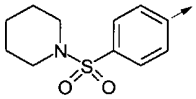
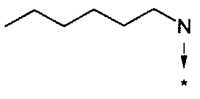
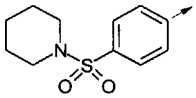
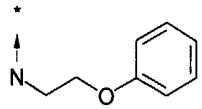
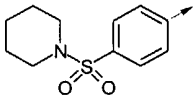
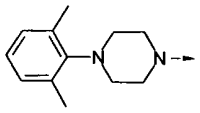
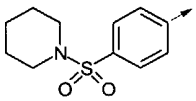
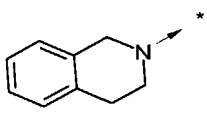


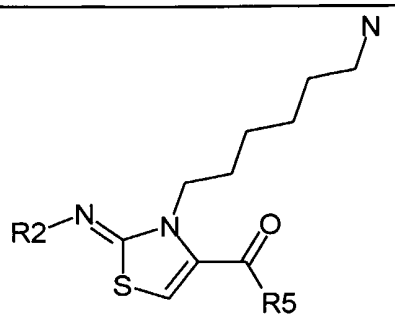
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1544			83,5	4,19	425,25
1545			78,8	5,1	535,25
1546			79,7	4,67	484,23
1547			88	5,46	537,27
1548			87,4	4,72	480,22
1549			82	4,94	494,23
1550			89,6	4,92	522,18
1551			86,9	5,03	599,27
1552			84,3	4,7	486,20
1553			82,7	3,36	455,18
1554			82	3,68	543,20

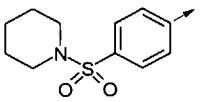
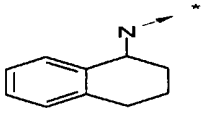
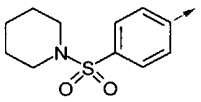
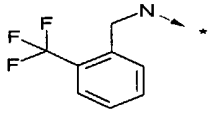
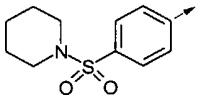
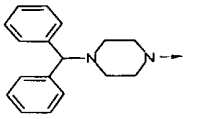
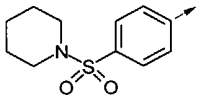
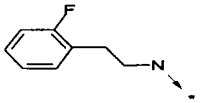
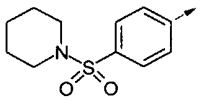
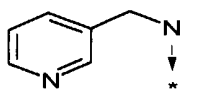
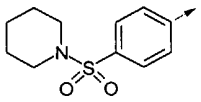
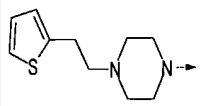
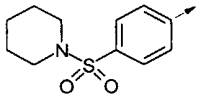
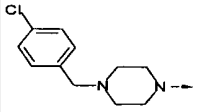
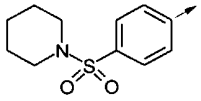
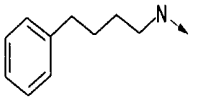
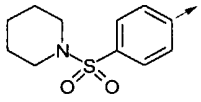
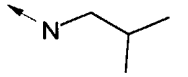
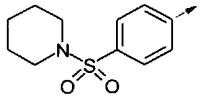
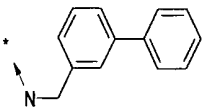
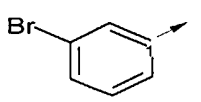
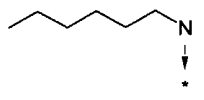


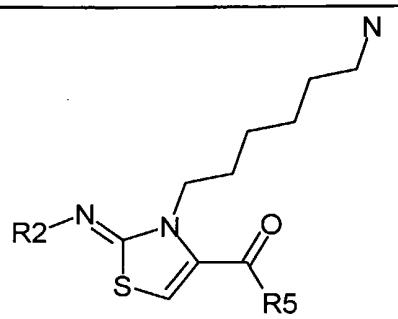
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1555			86,7	3,91	557,20
1556			80,9	5,06	496,26
1557			83,1	4,35	420,21
1558			87,5	5,2	530,22
1559			76,7	4,62	495,27
1560			80,9	4,44	531,25
1561			85,7	5,16	584,30
1562			85,4	4,51	527,25
1563			82,1	4,66	541,25
1564			87,4	4,66	569,19
1565			82,9	5,03	646,34

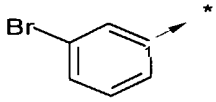
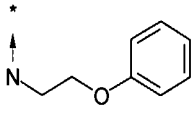
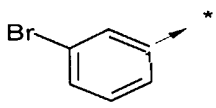
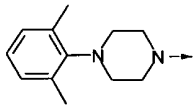
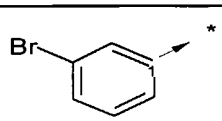
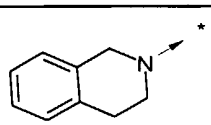
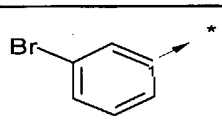
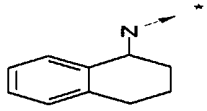
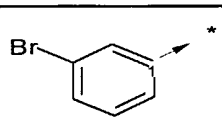
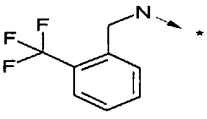
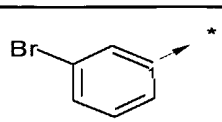
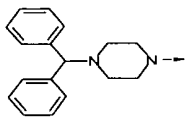
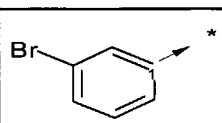
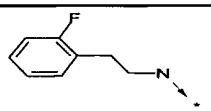
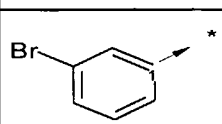
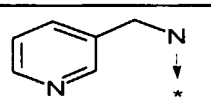
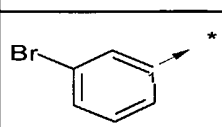
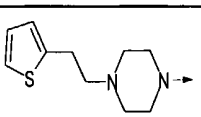
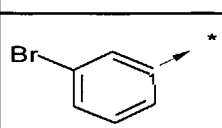
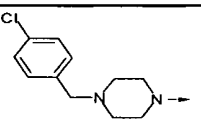
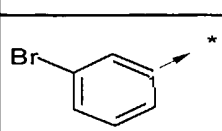
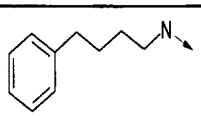


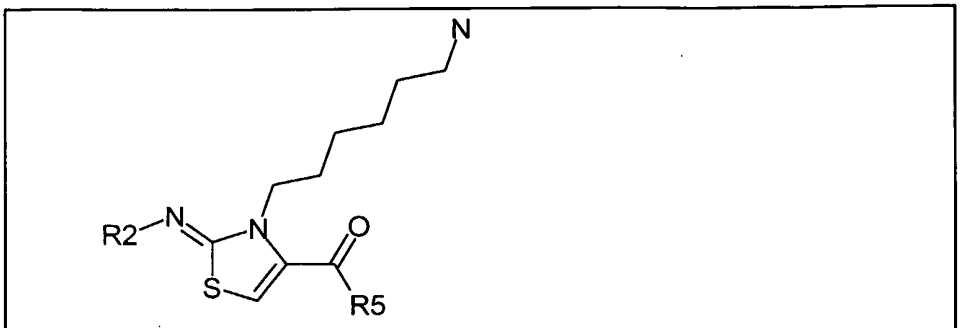
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1566			82,7	4,44	533,23
1567			85	3,46	502,24
1568			81,8	3,82	590,27
1569			84,5	4,03	604,26
1570			81,9	4,74	543,27
1571			84,3	4,13	467,25
1572			77,4	4,9	577,2
1573			77,7	5,15	550,3
1574			80,7	4,9	586,24
1575			86,4	5,6	639,34
1576			86,2	4,94	582,25

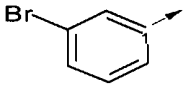
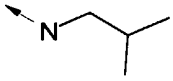
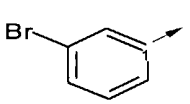
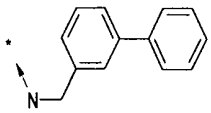


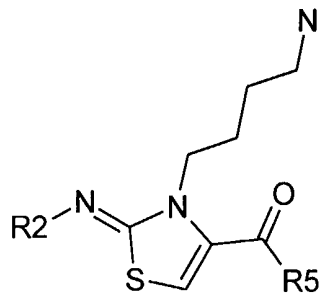
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
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1578			89,7	5,14	624,22
1579			86,1	5,22	701,35
1580			85,1	4,92	588,23
1581			81,7	3,67	557,23
1582			81	3,9	645,32
1583			85,2	4,12	659,31
1584			82,4	5,26	598,26
1585			83,6	4,62	522,25
1586			85,3	5,39	632,29
1587			82,8	4,94	481,16

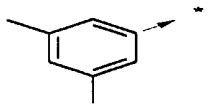
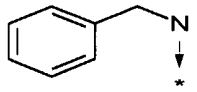
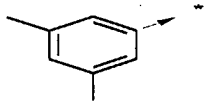
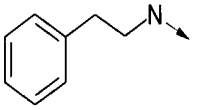
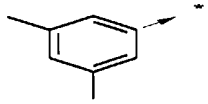
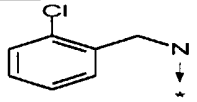
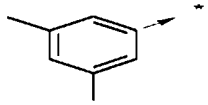
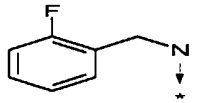
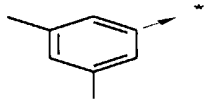
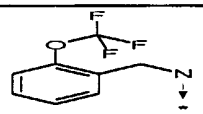
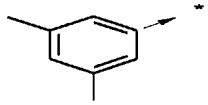
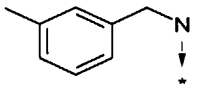
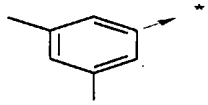
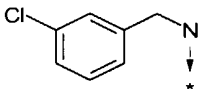
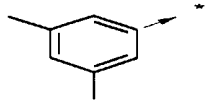
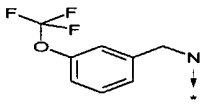
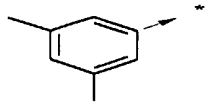
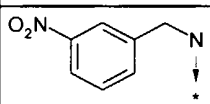
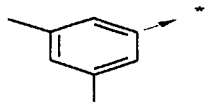
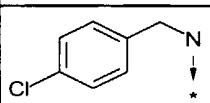
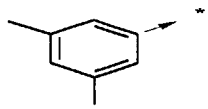
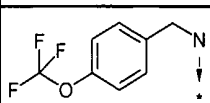


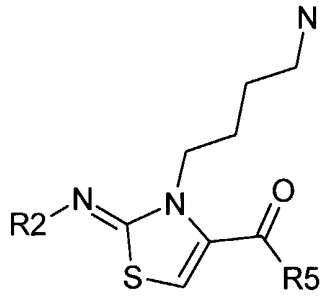
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1588			84,3	4,71	517,16
1589			89,6	5,54	570,16
1590			87,8	4,78	513,13
1591			85,2	4,99	527,15
1592			90,9	4,98	555,07
1593			88,1	5,21	632,22
1594			86,9	4,72	519,10
1595			87,4	3,47	488,12
1596			82,5	3,82	576,16
1597			86,1	4,06	590,12
1598			85,1	5,08	529,16

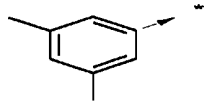
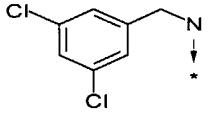
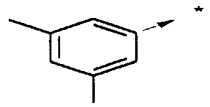
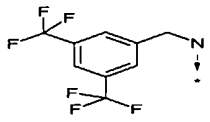
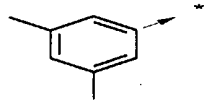
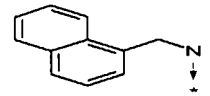
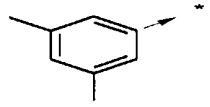
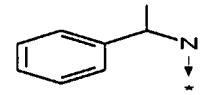
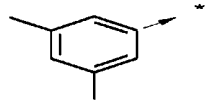
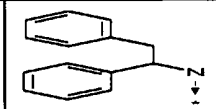
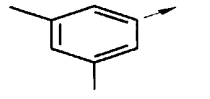
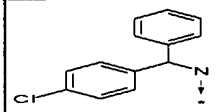
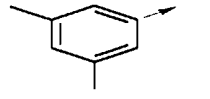
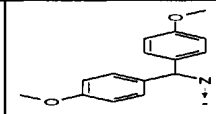
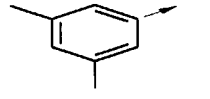
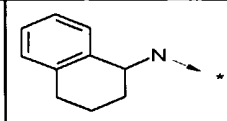
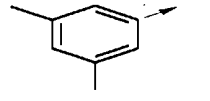
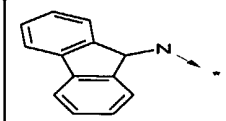
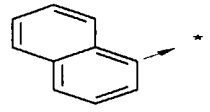
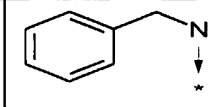
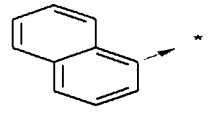
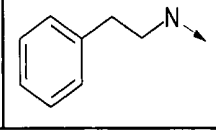


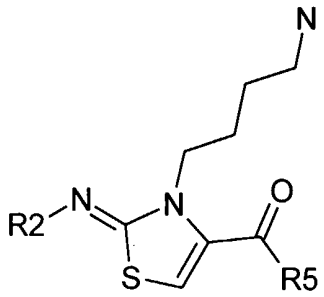
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1599			84,8	4,34	453,13
1600			74,9	5,26	563,13

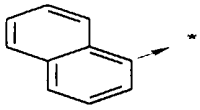
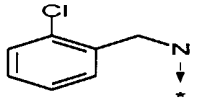
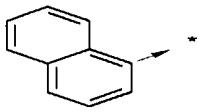
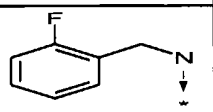
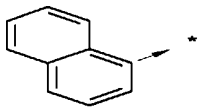
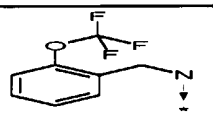
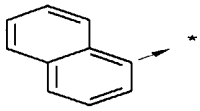
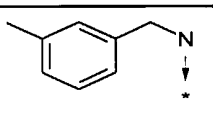
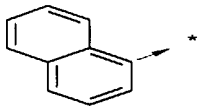
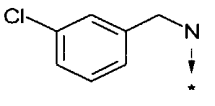
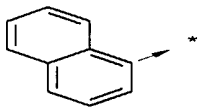
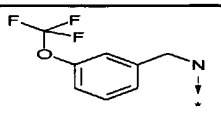
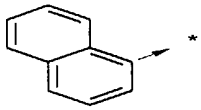
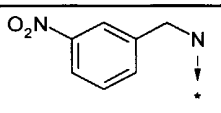
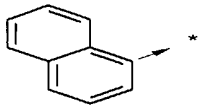
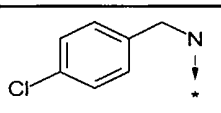
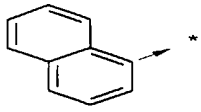
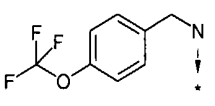
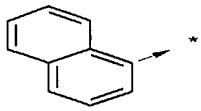
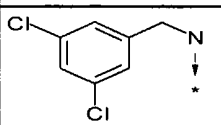
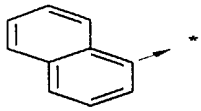
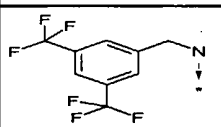


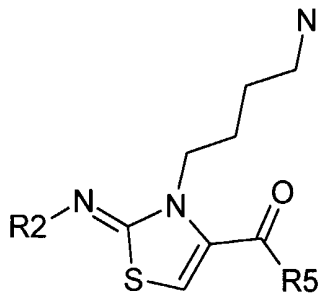
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1601			88,1	3,87	409,24
1602			90,1	4.0	423,26
1603			60,2	4,1	443,21
1604			91	3,9	427,24
1605			57,6	4,4	493,23
1606			48,1	4,12	423,27
1607			45,1	4,2	443,22
1608			60,8	4,49	493,24
1609			54,5	3,98	454,26
1610			84	4,19	443,23
1611			92,8	4,49	493,25

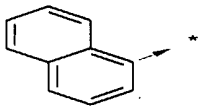
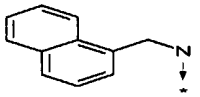
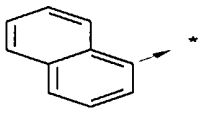
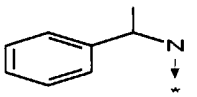
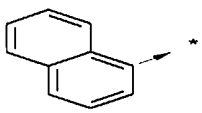
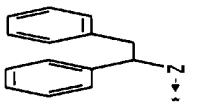
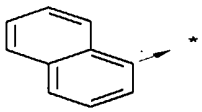
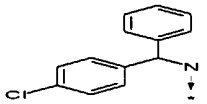
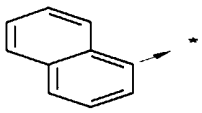
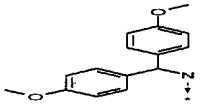
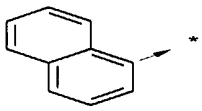
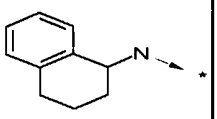
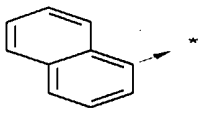
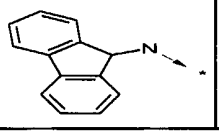


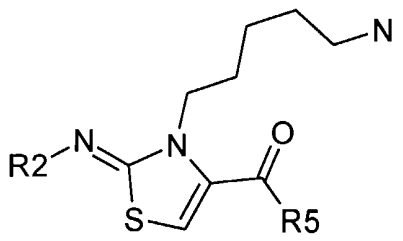
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1612			86,2	4,51	477,21
1613			84,1	4,84	545,22
1614			77,7	4,34	459,30
1615			90,6	3,95	423,29
1616			91,8	4,6	499,35
1617			91,9	4,86	519,27
1618			62	4,6	545,3
1619			91,7	4,28	449,32
1620			63,1	4,62	483,29
1621			83,8	4,41	431,26
1622			64,2	4,55	445,26

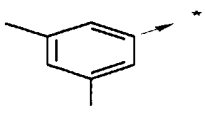
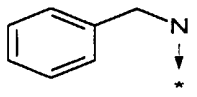


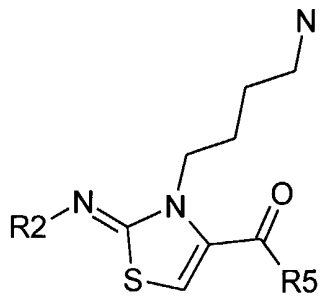
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1623			48,9	4,66	465,21
1624			89	4,46	449,27
1625			56,7	4,94	515,24
1626			78,4	4,65	445,25
1627			44,5	4,72	465,21
1628			84,7	5,01	515,24
1629			73,9	4,5	476,27
1630			76,8	4,74	465,21
1631			88,6	5,02	515,24
1632			90,6	5,05	499,19
1633			89,4	5,35	567,21

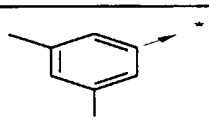
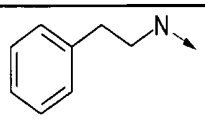
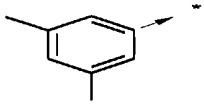
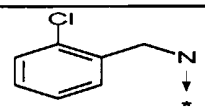
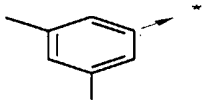
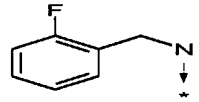
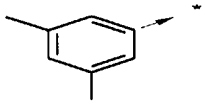
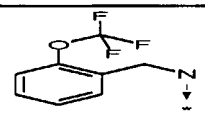
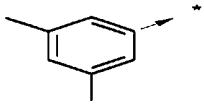
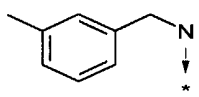
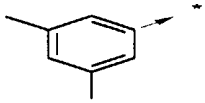
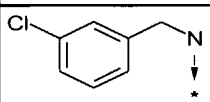
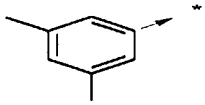
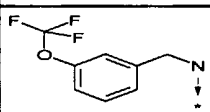
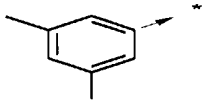
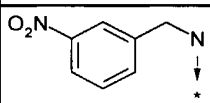
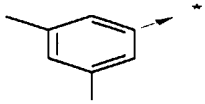
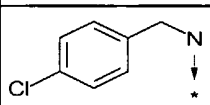
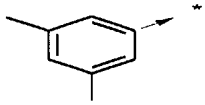
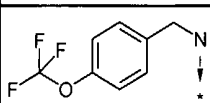
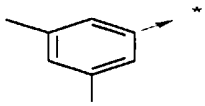
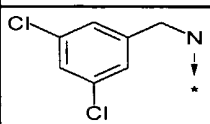


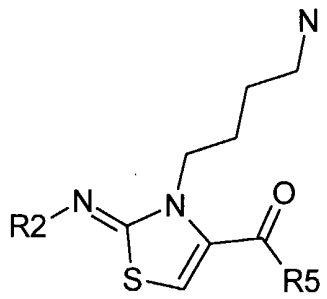
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1634			80,6	4,88	481,28
1635			90,6	4,49	445,26
1636			91,1	5,14	521,28
1637			91,2	5,38	541,23
1638			90	5,1	567,3
1639			92,9	4,84	471,28
1640			88,3	5,13	505,28

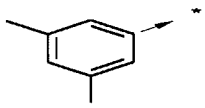
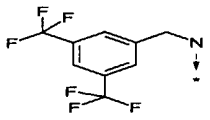
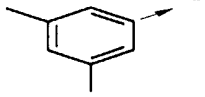
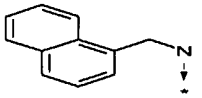
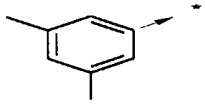
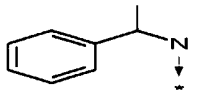
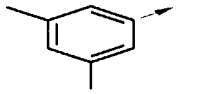
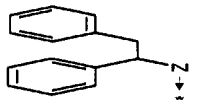
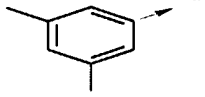
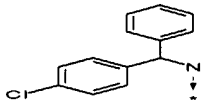
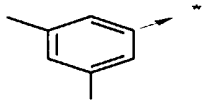
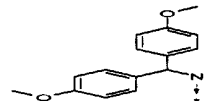
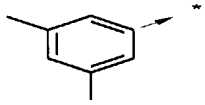
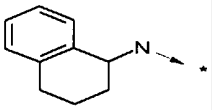
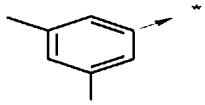
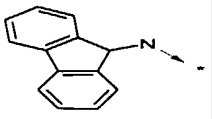
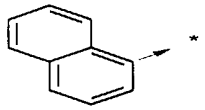
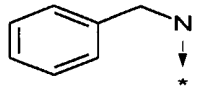
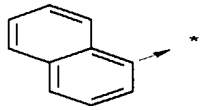
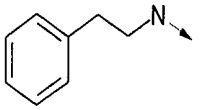
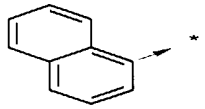
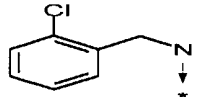


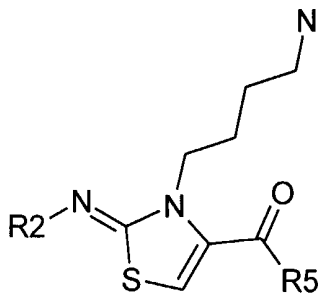
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1641			83,5	3,86	423,29

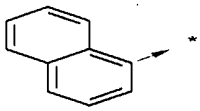
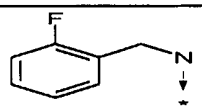
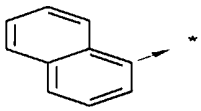
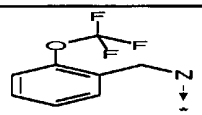
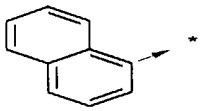
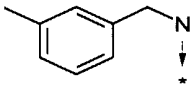
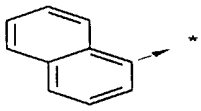
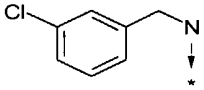
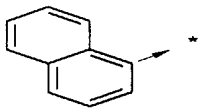
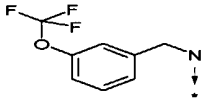
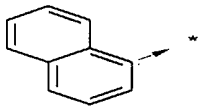
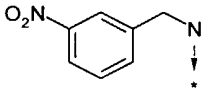
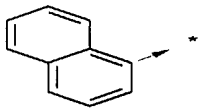
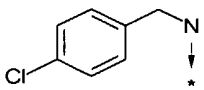
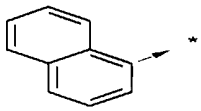
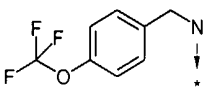
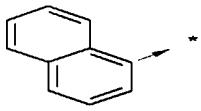
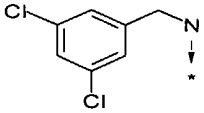
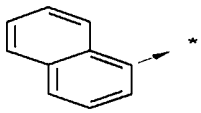
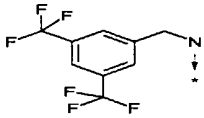
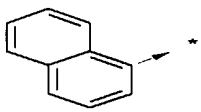
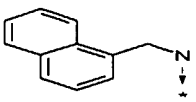


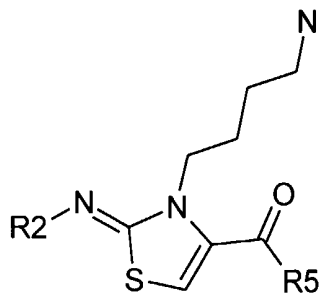
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1642			81,9	4	437,30
1643			81,1	4,07	457,25
1644			89,9	3,89	441,27
1645			91,5	4,35	507,27
1646			70,6	4,08	437,31
1647			73,2	4,14	457,26
1648			91,7	4,42	507,27
1649			61,9	3,96	468,26
1650			82,6	4,16	457,25
1651			78,5	4,46	507,26
1652			80	4,46	491,21

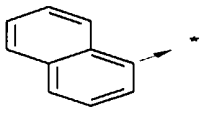
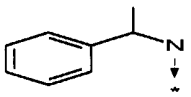
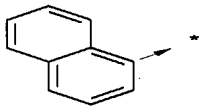
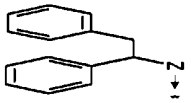
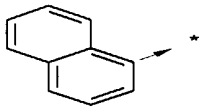
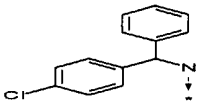
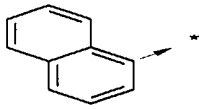
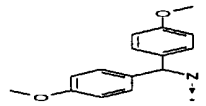
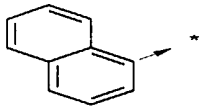
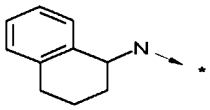
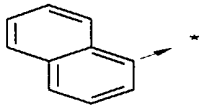
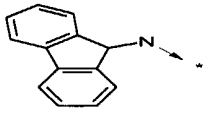


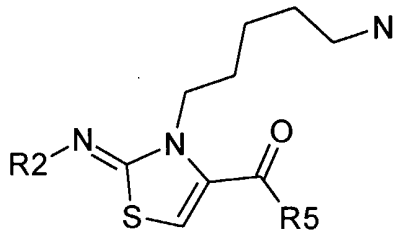
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1653			80,7	4,78	559,24
1654			90,3	4,28	473,33
1655			91,4	3,93	437,30
1656			93,5	4,55	513,33
1657			92,8	4,82	533,27
1658			58	4,5	559,3
1659			92,1	4,24	463,32
1660			92,2	4,53	497,29
1661			36,9	4,42	445,25
1662			31	4,56	459,28
1663			38,9	4,67	479,24

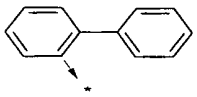
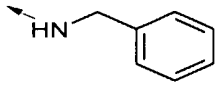
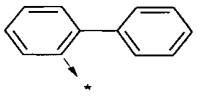
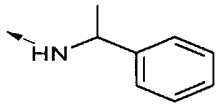
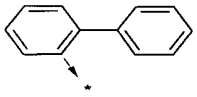
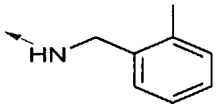
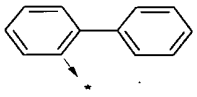
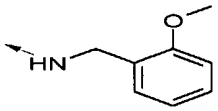
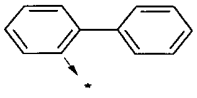
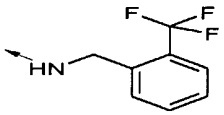
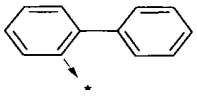
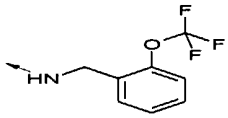
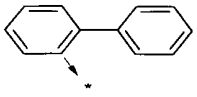
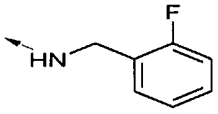
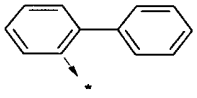
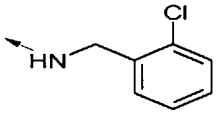
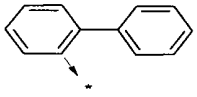
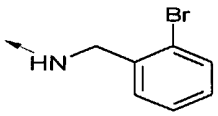
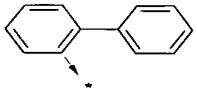
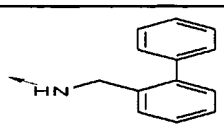
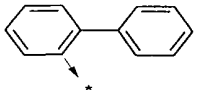
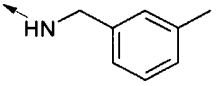


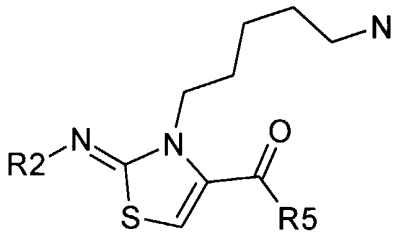
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1664			43,4	4,47	463,27
1665			47,9	4,98	529,2
1666			32,1	4,66	459,28
1667			23	4,74	479,23
1668			38,1	5,02	529,25
1669			35,5	4,51	490,27
1670			47,1	4,74	479,23
1671			37,1	5,04	529,25
1672			60,9	5,07	513,19
1673			82,8	5,34	581,23
1674			20,5	4,91	495,27

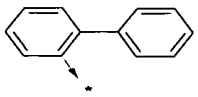
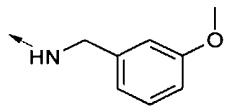
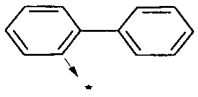
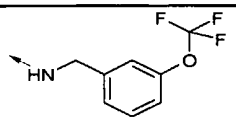
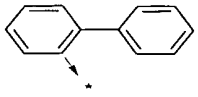
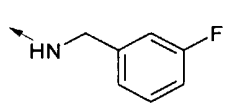
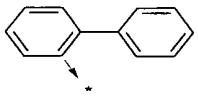
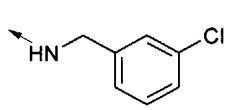
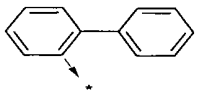
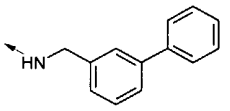
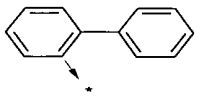
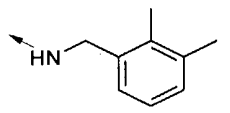
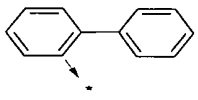
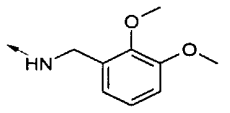
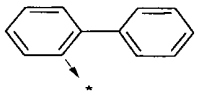
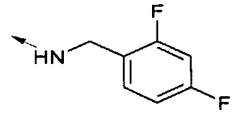
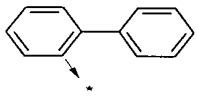
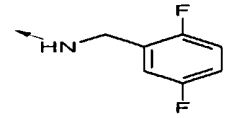
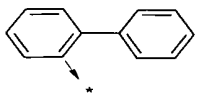
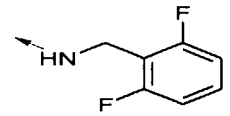
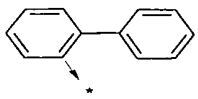
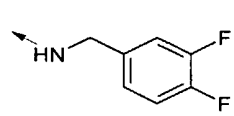


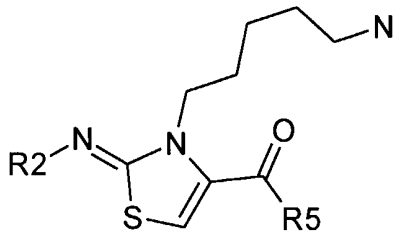
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1675			72	4,52	459,28
1676			91,1	5,14	535,30
1677			89,3	5,4	555,23
1678			52	5,1	581,3
1679			91,3	4,84	485,31
1680			71,7	5,14	519,29

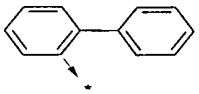
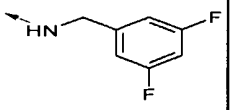
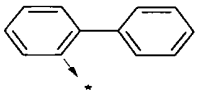
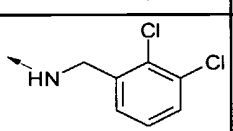
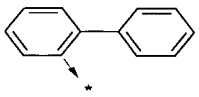
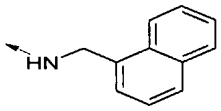


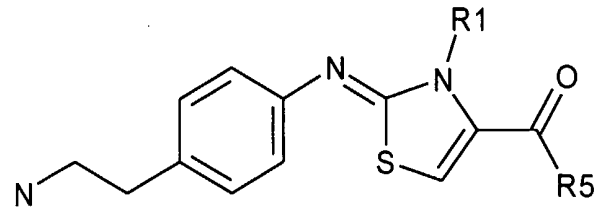
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1681			72,7	4,26	471,34
1682			76,3	4,36	485,34
1683			51,6	4,47	485,33
1684			33,6	4,39	501,32
1685			79,9	4,7	539,29
1686			76	4,77	555,28
1687			53,2	4,34	489,30
1688			59,2	4,51	505,27
1689			74,7	4,57	549,21
1690			82	4,84	547,34
1691			68,8	4,49	485,32

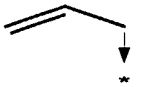
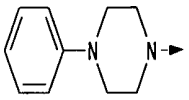
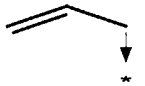
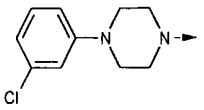
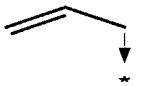
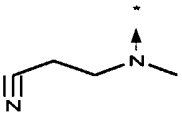
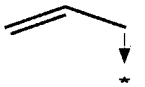
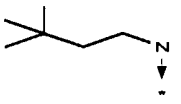
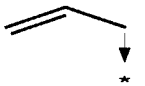
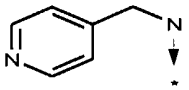
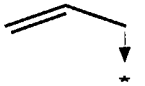
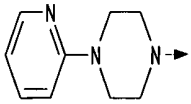
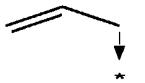
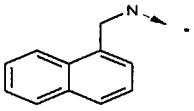
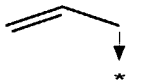
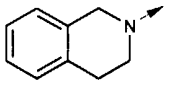
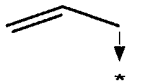
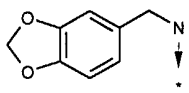
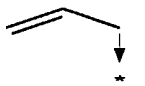
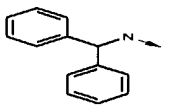
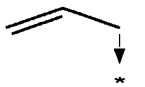
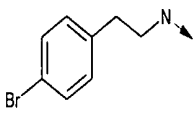


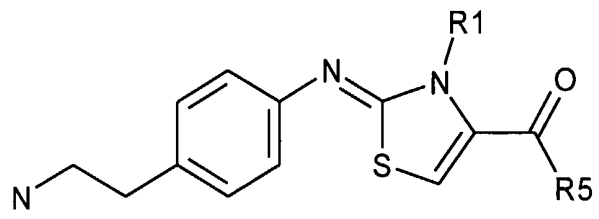
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1692			73,4	4,25	501,37
1693			75,0	4,83	555,27
1694			44,5	4,39	489,30
1695			42,7	4,57	505,25
1696			79,8	4,97	547,32
1697			78,9	4,56	499,39
1698			70,8	4,27	531,36
1699			77,5	4,35	507,33
1700			78,9	4,34	507,33
1701			75,8	4,27	507,32
1702			74,9	4,41	507,32

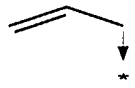
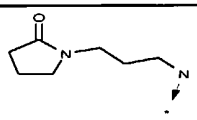
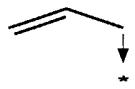
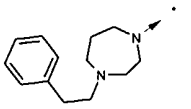
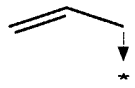
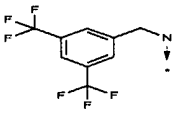
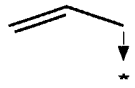
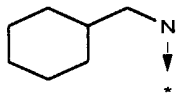
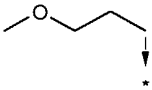
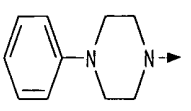
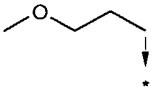
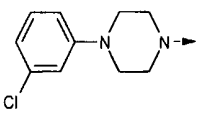
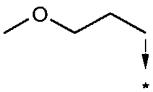
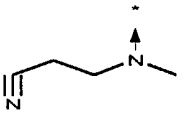
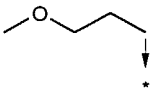
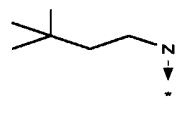
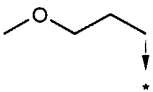
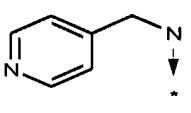
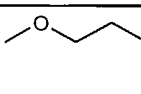
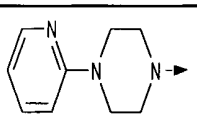
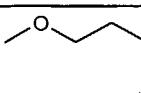
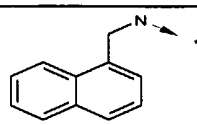


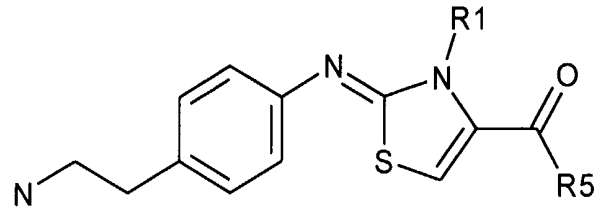
Ex.	R2	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1703			75,3	4,49	507,29
1704			73,5	4,75	539,22
1705			82,9	4,7	521,31

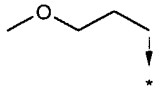
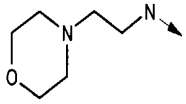
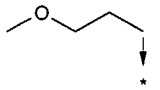
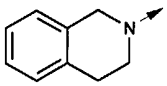
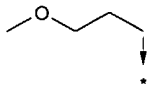
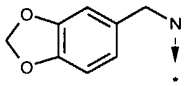
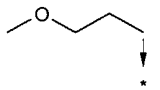
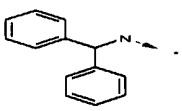
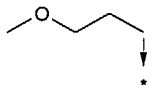
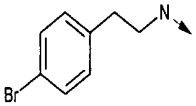
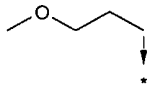
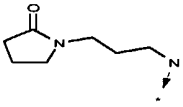
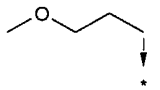
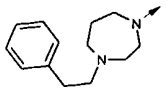
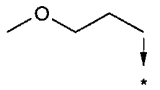
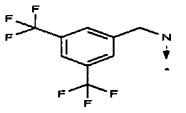
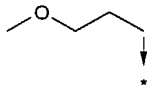
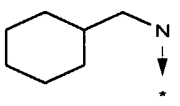
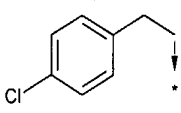
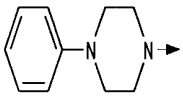
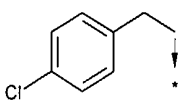
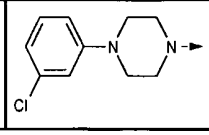


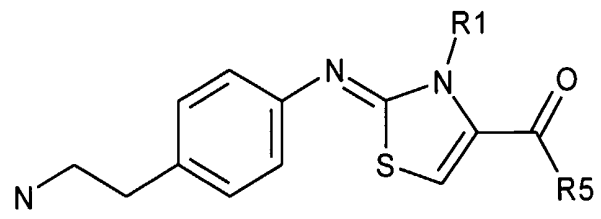
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1706			87,3	3,8	448,31
1707			86,0	4,3	482,24
1708			90,0	2,4	370,24
1709			76,6	3,88	387,26
1710			53,2	3.0	394,2
1711			91,2	2,3	449,29
1712			87,7	4,13	443,29
1713			88,3	3,7	419,28
1714			70,8	3,5	437,25
1715			87,0	4,4	469,30
1716			82,5	4,12	485,20

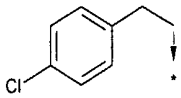
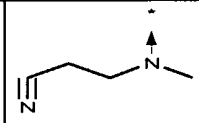
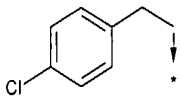
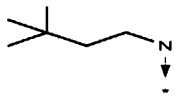
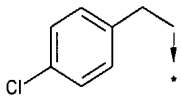
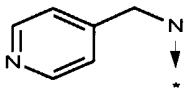
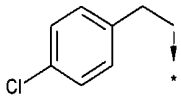
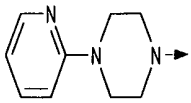
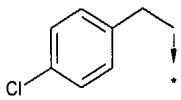
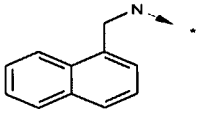
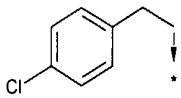
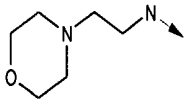
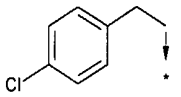
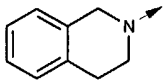
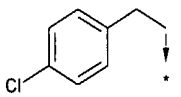
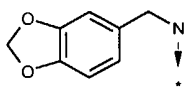
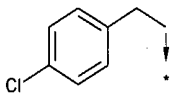
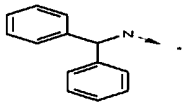
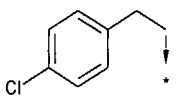
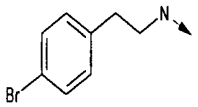
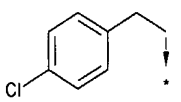
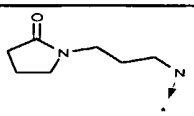


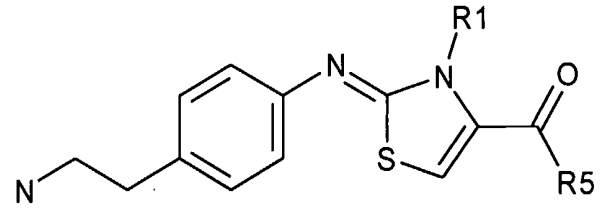
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1717			88,1	2,59	428,29
1718			88,7	2,8	490,35
1719			79,0	4,68	529,23
1720			78,0	3,94	399,29
1721			87,4	3,7	480,32
1722			83,1	4,14	514,28
1723			89,1	2,44	402,24
1724			81,5	3,73	419,3
1725			56,1	3.0	416,2
1726			90,1	2,3	481,33
1727			87,3	3,96	475,31

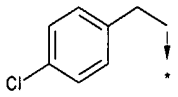
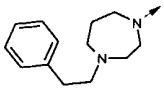
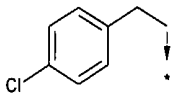
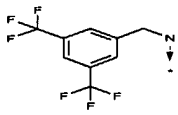
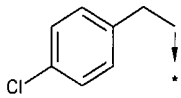
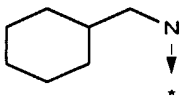
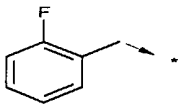
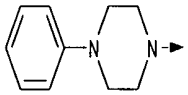
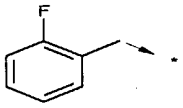
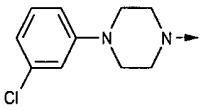
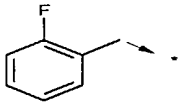
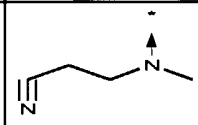
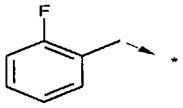
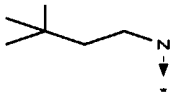
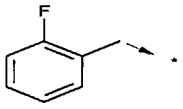
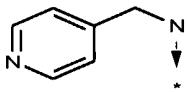
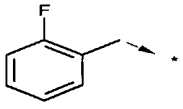
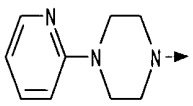
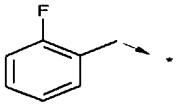
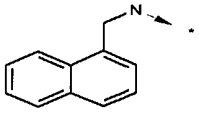
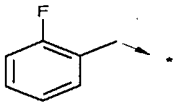
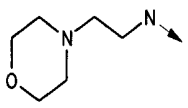


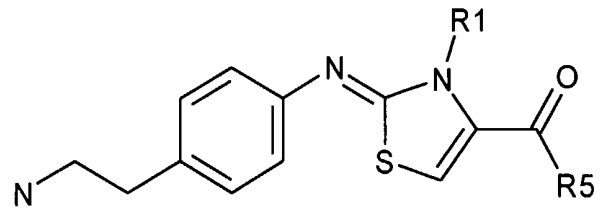
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1728			75,2	2,9	448,3
1729			85,7	3,61	451,29
1730			74,5	3,37	469,28
1731			83,7	4,22	501,32
1732			86,7	3,95	517,20
1733			80,6	2,61	460,32
1734			80,8	2,8	522,35
1735			74,0	4,48	561,23
1736			81,2	3,8	431,31
1737			87,1	4,76	546,27
1738			85,5	5,16	580,24

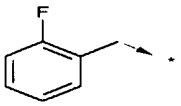
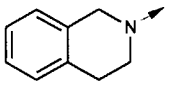
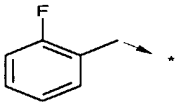
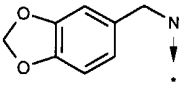
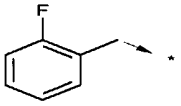
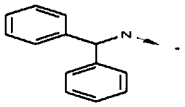
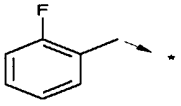
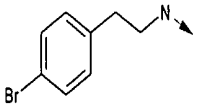
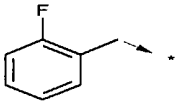
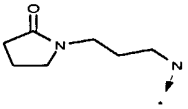
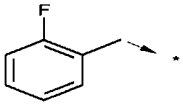
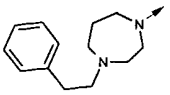
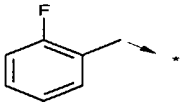
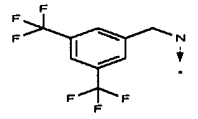
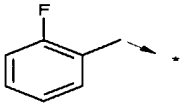
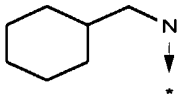
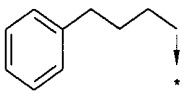
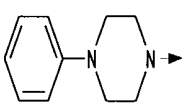
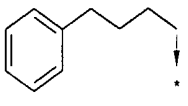
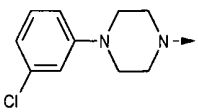
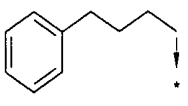
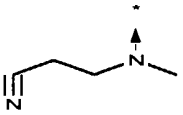


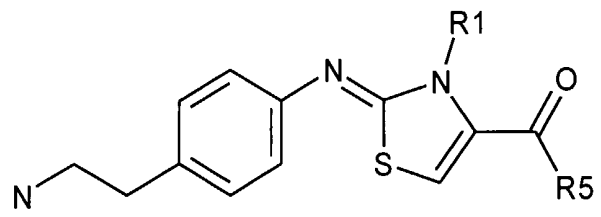
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1739			85,5	3,72	468,24
1740			82,1	4,74	485,29
1741			80,7	3,04	492,24
1742			87,7	3,4	547,28
1743			81,9	4,96	541,23
1744			55,2	2,9	514,27
1745			87,2	4,7	517,25
1746			73,7	4,39	535,21
1747			84,3	5,22	567,25
1748			74,7	4,9	583,16
1749			76,8	3,53	526,28

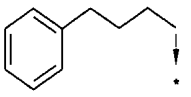
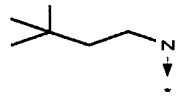
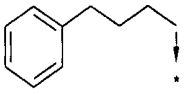
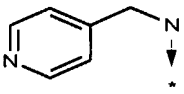
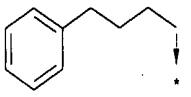
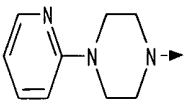
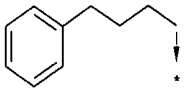
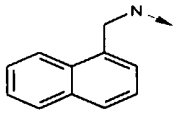
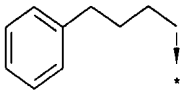
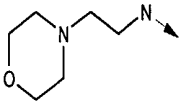
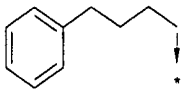
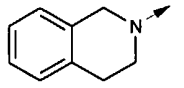
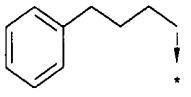
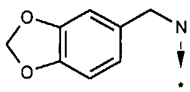
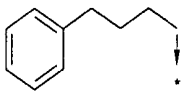
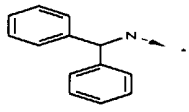
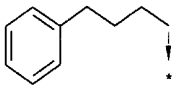
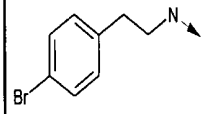
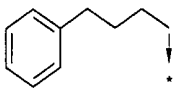
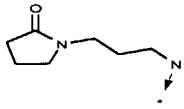
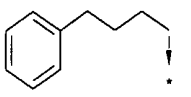
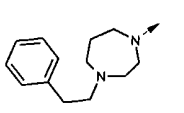


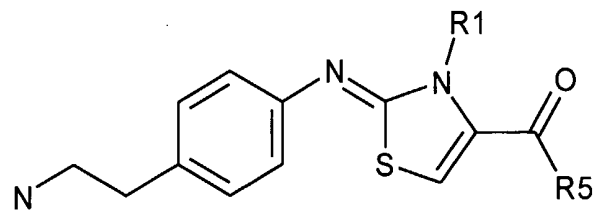
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1750			84,3	3,7	588,34
1751			74,4	5,41	627,20
1752			80,9	4,88	497,31
1753			83,4	4,53	516,2
1754			83,2	4,96	550,24
1755			84,1	3,39	438,25
1756			84,7	4,71	455,28
1757			56,6	2,8	462,24
1758			85,0	3.0	517,30
1759			84,6	4,9	511,26
1760			82,1	2,8	484,3

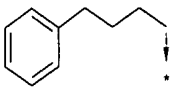
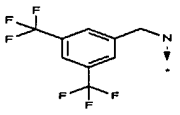
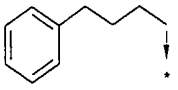
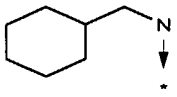


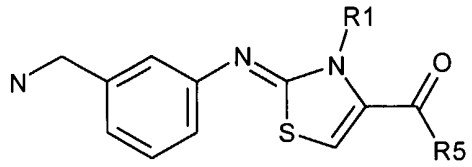
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1761			84,4	4,44	487,27
1762			52,0	4,3	505,23
1763			84,5	5,12	537,28
1764			81,5	4,93	553,17
1765			80,2	3,34	496,29
1766			85,9	3,5	558,31
1767			53,4	5,39	597,22
1768			81,6	4,81	467,29
1769			83,5	3,5	540,32
1770			82,4	5,01	574,27
1771			80,9	3,72	462,30

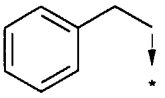
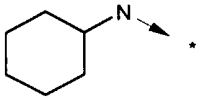
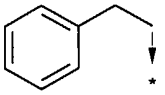
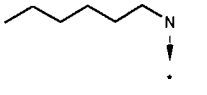
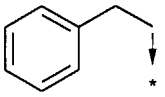
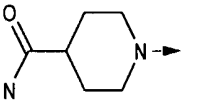
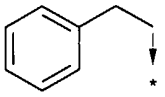
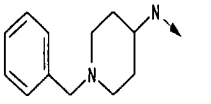
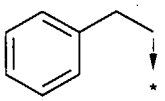
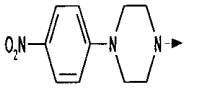
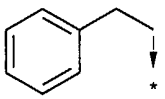
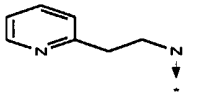
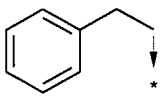
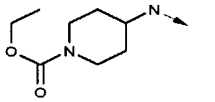
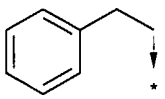
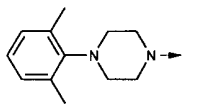
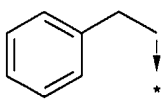
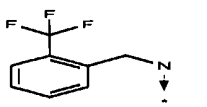
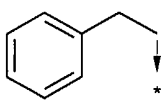
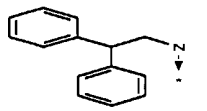
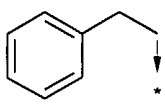
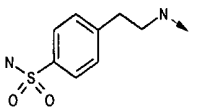
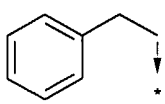
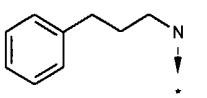


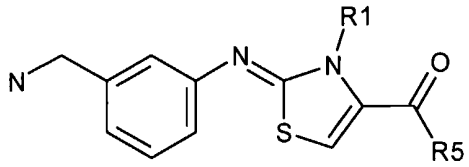
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1772			77,9	4,78	479,36
1773			79,3	3,11	486,32
1774			85,0	3,4	541,35
1775			85,3	4,9	535,31
1776			74,9	3.0	508,34
1777			83,9	4,58	511,33
1778			69,1	4,4	529,3
1779			83,1	5,1	561,3
1780			81,8	4,9	577,23
1781			83,6	3,64	520,34
1782			80,9	3,7	582,4

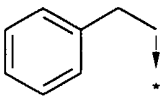
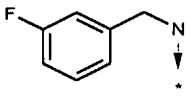
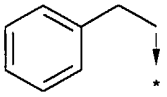
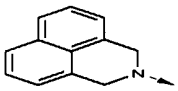
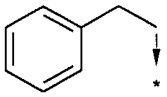
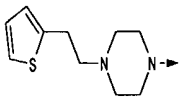
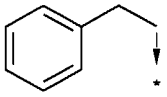
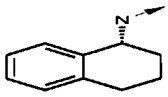
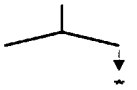
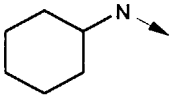
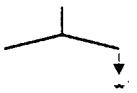
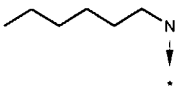
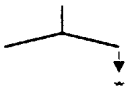
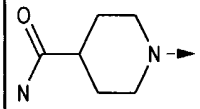
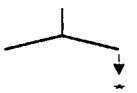
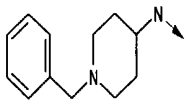
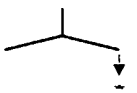
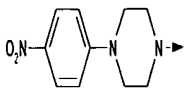
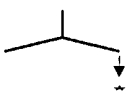
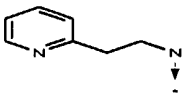
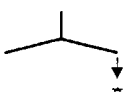
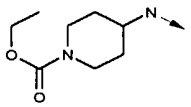
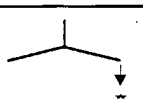
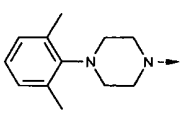


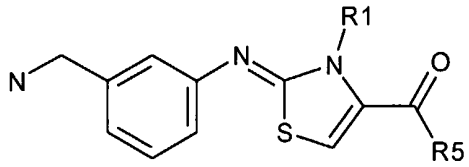
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1783			68,0	5,34	621,28
1784			76,3	4,85	491,36

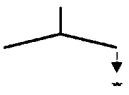
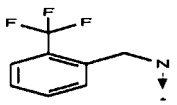
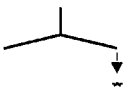
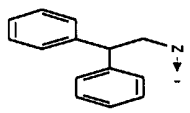
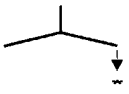
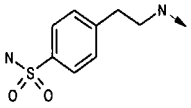
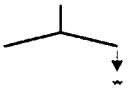
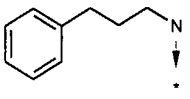
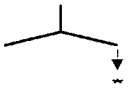
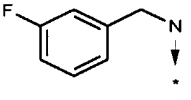
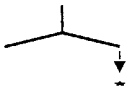
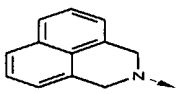
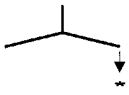
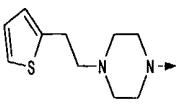
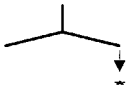
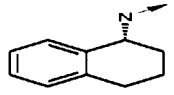
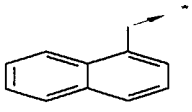
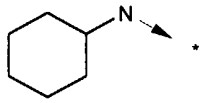
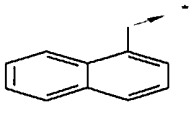
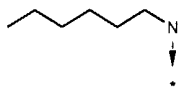
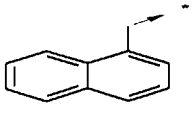
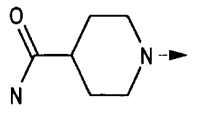
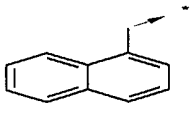
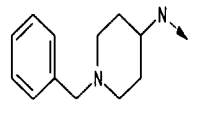


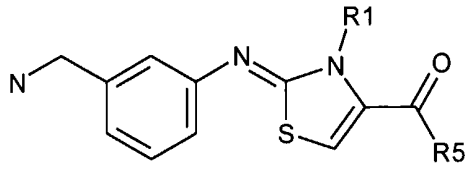
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1785			77,9	4,44	435,25
1786			78,8	4,83	437,30
1787			79,5	3,13	464,27
1788			80,3	3,28	526,38
1789			86,6	4,67	543,32
1790			74,8	2,9	458,32
1791			81,7	3,99	508,34
1792			86,9	5,41	526,38
1793			86,4	4,85	511,27
1794			82,2	5,07	533,35
1795			83,1	3,55	536,28
1796			82,3	4,66	471,3

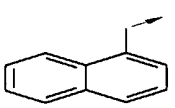
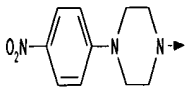
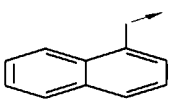
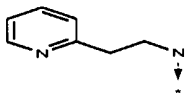
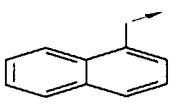
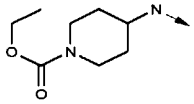
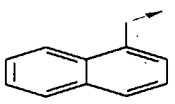
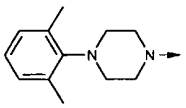
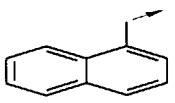
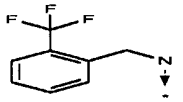
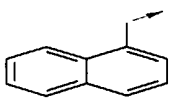
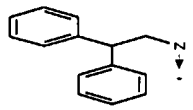
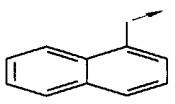
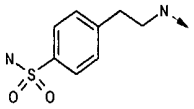
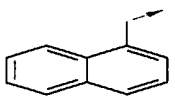
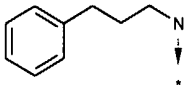
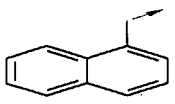
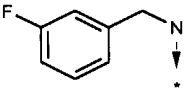
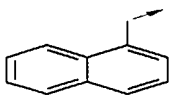
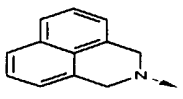
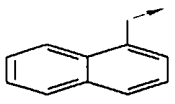
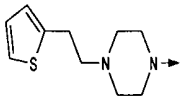
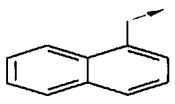
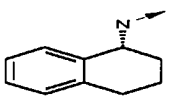


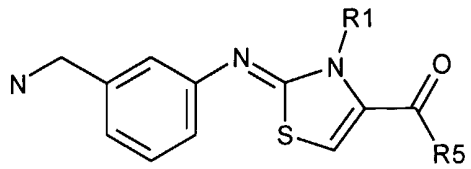
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1797			86,3	4,41	461,31
1798			85,1	4,95	505,33
1799			76,0	3,5	532,3
1800			81,1	4,87	483,34
1801			68,62	3,96	387,33
1802			73,4	4,39	389,33
1803			81,2	2,57	416,32
1804			79,2	2,9	478,3
1805			83,2	4,26	495,34
1806			70,2	2,5	410,3
1807			73,3	3,6	460,37
1808			75,0	5,01	478,39

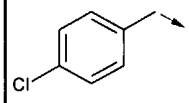
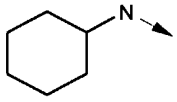
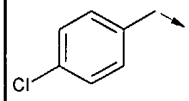
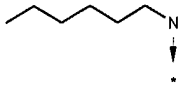
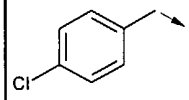
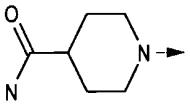
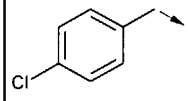
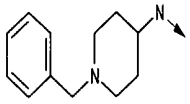
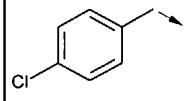
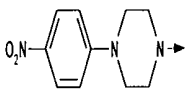
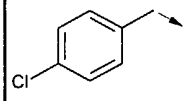
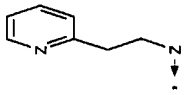
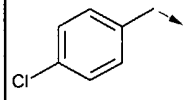
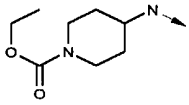
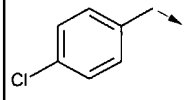
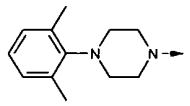
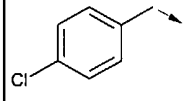
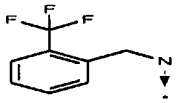
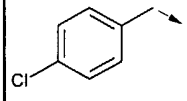
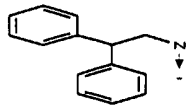
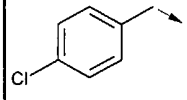
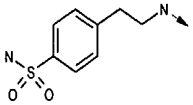
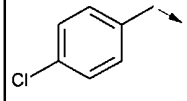
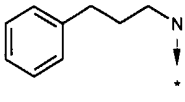


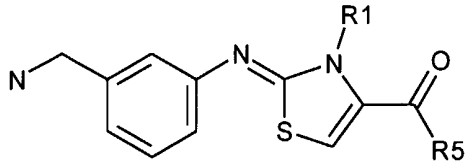
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1809			70,3	4,45	463,31
1810			83,9	4,73	485,37
1811			76,5	3,14	488,31
1812			79,1	4,28	423,35
1813			79,2	3,99	413,29
1814			75,5	4,55	457,33
1815			67,7	3,1	484,3
1816			62,7	4,44	435,33
1817			85,7	5,02	471,33
1818			70,2	5,31	473,37
1819			86,6	3,59	500,35
1820			83,8	3,7	562,4

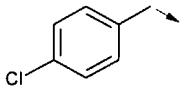
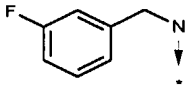
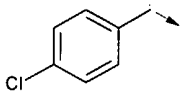
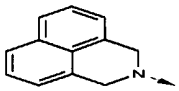
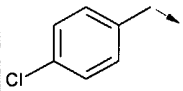
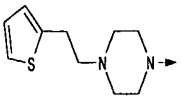
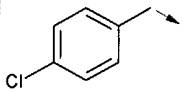
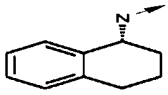
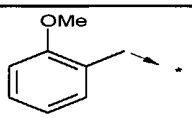
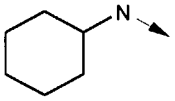
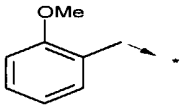
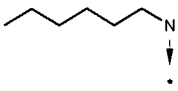
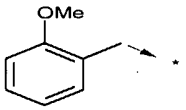
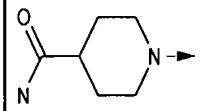
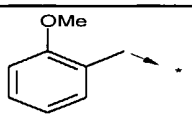
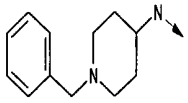
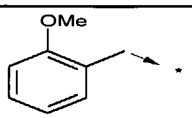
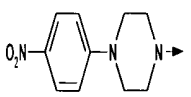
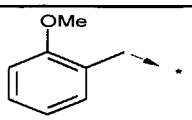
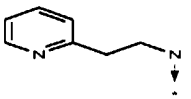
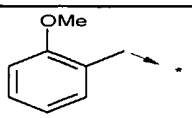
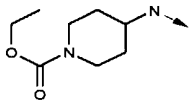
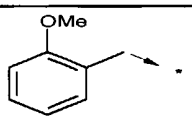
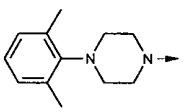


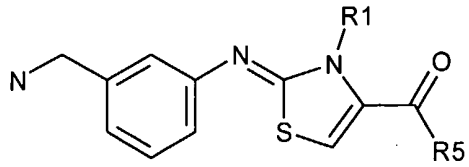
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
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1822			39,8	3,3	494,3
1823			85,8	4,55	544,33
1824			86,4	5,78	562,36
1825			84,3	5,27	547,25
1826			69,7	5,58	569,32
1827			70,3	4,17	572,27
1828			85,4	5,17	507,34
1829			82,3	4,91	497,28
1830			82,4	5,41	541,29
1831			79,4	3,8	568,3
1832			86,9	5,31	519,33

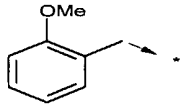
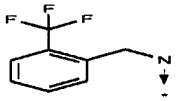
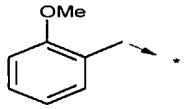
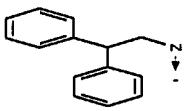
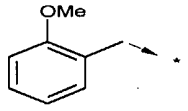
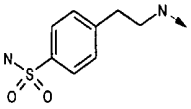
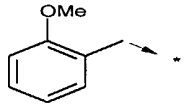
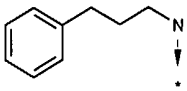
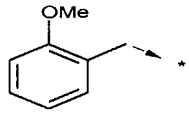
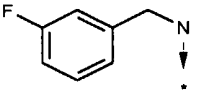
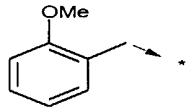
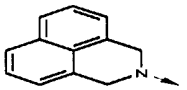
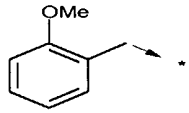
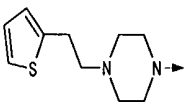
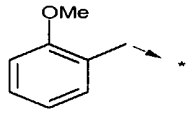
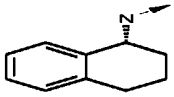


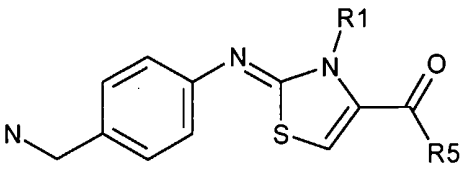
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1833			86,3	4,99	455,27
1834			84,5	5,3	457,30
1835			88,3	3,42	484,27
1836			83,6	3,65	546,29
1837			88,8	4,91	563,24
1838			65,2	3,3	478,24
1839			87,6	4,5	528,30
1840			90,4	5,68	546,30
1841			82,8	5,31	531,23
1842			68,2	5,57	553,28
1843			72,4	4,11	556,21
1844			83,9	5,15	491,29

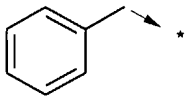
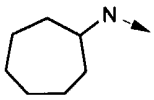
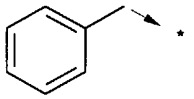
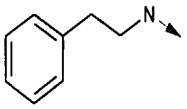
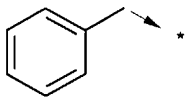
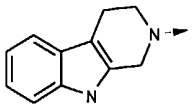
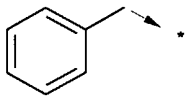
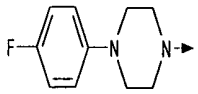
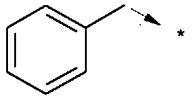
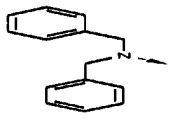
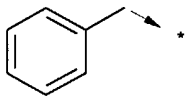
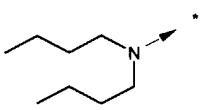
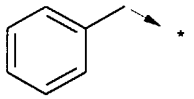
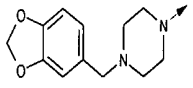
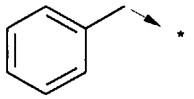
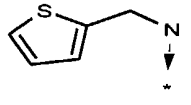
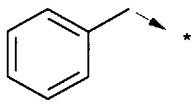
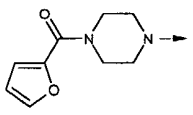
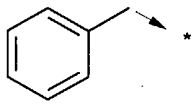
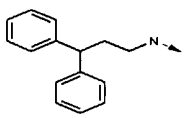
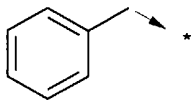
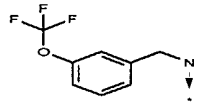
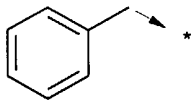
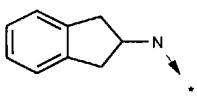


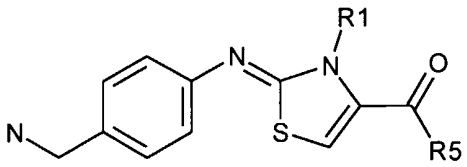
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1845			86,4	4,93	481,27
1846			86,3	5,29	525,25
1847			82,6	3,7	552,3
1848			88,1	5,3	503,29
1849			82,9	4,25	451,32
1850			82,1	4,64	453,35
1851			85,6	2,72	480,33
1852			82,9	3,16	542,35
1853			87,7	4,28	559,29
1854			75,3	2,82	474,33
1855			84,4	3,83	524,32
1856			87,0	5.0	542,36

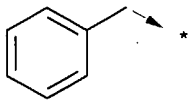
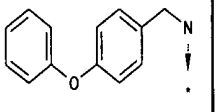
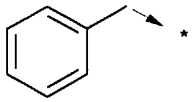
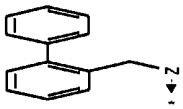
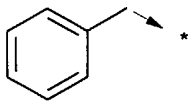
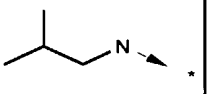
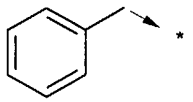
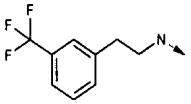
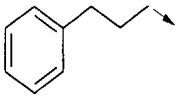
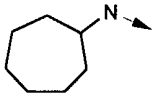
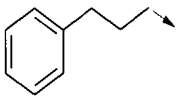
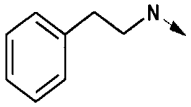
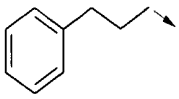
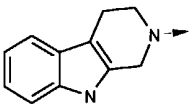
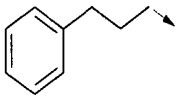
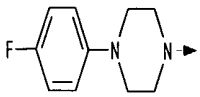
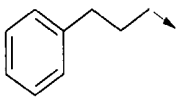
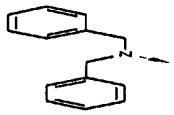
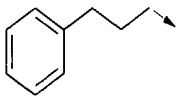
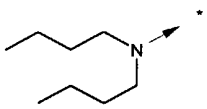
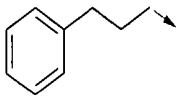
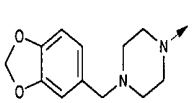
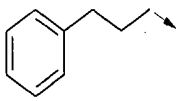
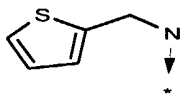


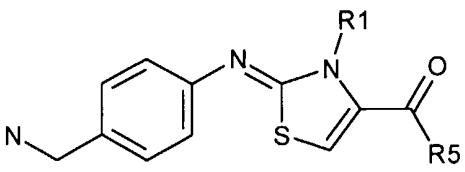
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1857			82,6	4,73	527,28
1858			65,8	5,01	549,31
1859			76,4	3,49	552,26
1860			80,4	4,54	487,35
1861			81,3	4,28	477,30
1862			79,9	4,59	521,29
1863			77,5	3,2	548,3
1864			86,5	4,65	499,32

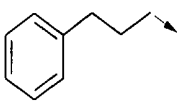
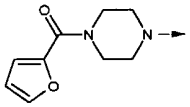
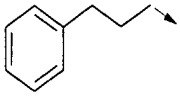
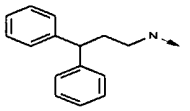
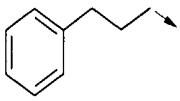
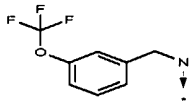
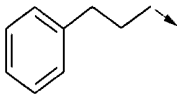
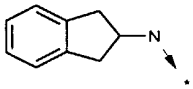
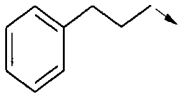
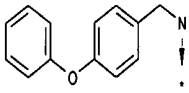
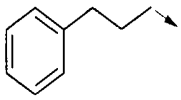
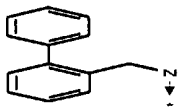
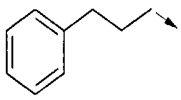
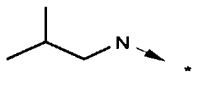
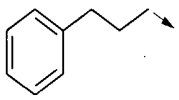
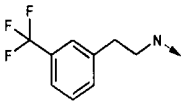
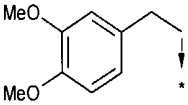
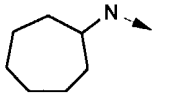
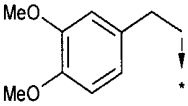
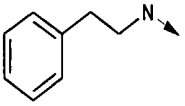
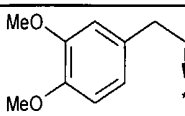
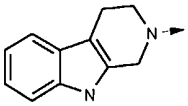
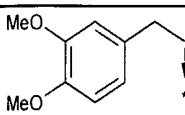
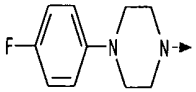


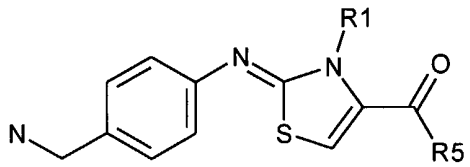
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1865			84,7	4,94	435,29
1866			85,0	4,66	443,26
1867			26,2	4,82	494,26
1868			88,4	4,8	502,28
1869			83,6	5,48	519,28
1870			63,17	5,3	451,33
1871			91,1	3,4	542,3
1872			35,7	4,48	435,20
1873			88,8	3,8	502,26
1874			87,1	5,41	533,29
1875			89,5	5,14	513,22
1876			47,8	4,82	455,24

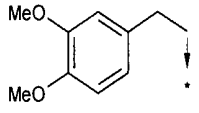
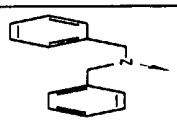
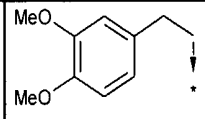
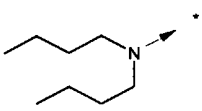
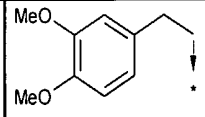
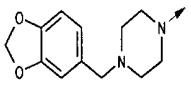
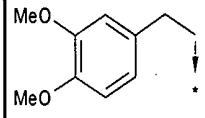
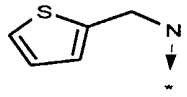
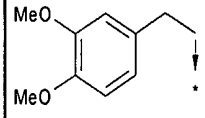
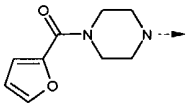
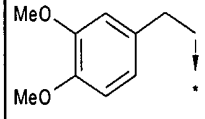
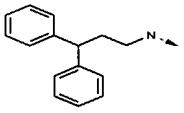
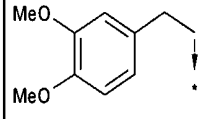
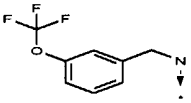
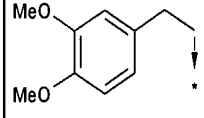
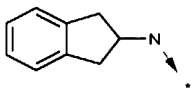
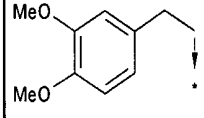
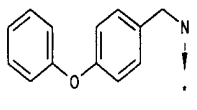
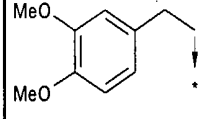
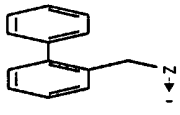
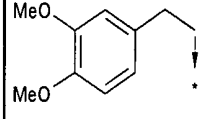
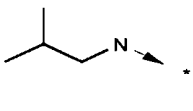
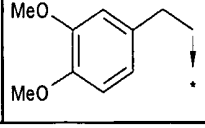
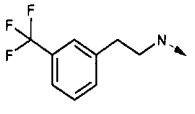


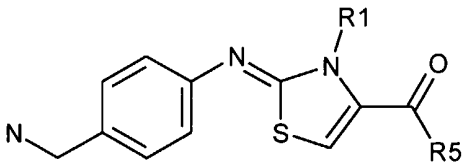
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1877			77,1	5,32	521,24
1878			81,8	5,31	505,26
1879			19,7	4,37	395,24
1880			61,4	5,14	511,22
1881			82,7	4,95	463,31
1882			82,2	4,71	471,27
1883			67,2	4,84	522,26
1884			87,7	4,9	530,28
1885			79,4	5,54	547,28
1886			80,8	5,3	479,34
1887			88,9	3,6	570,24
1888			30,2	4,53	463,23

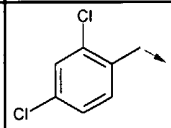
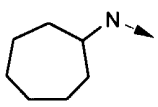
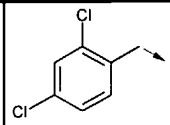
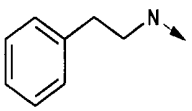
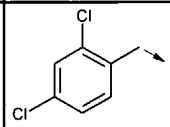
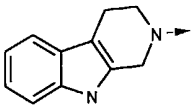
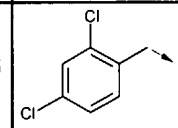
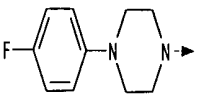
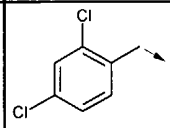
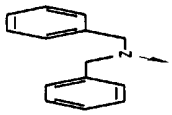
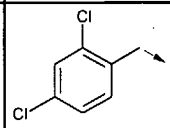
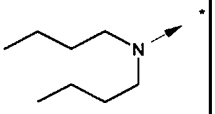
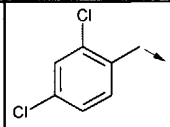
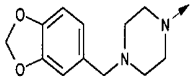
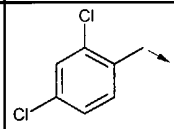
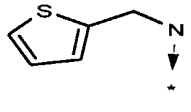
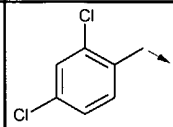
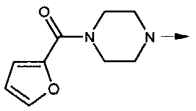
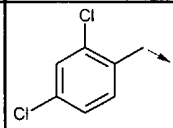
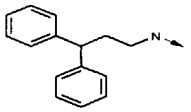
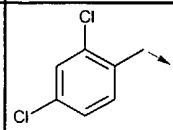
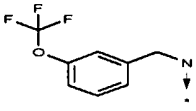
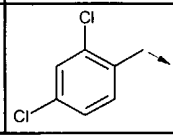
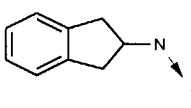


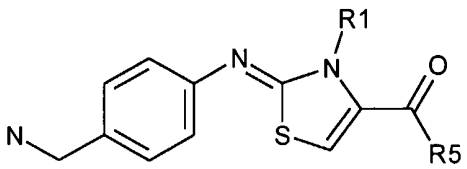
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1889			88,9	3,98	530,26
1890			84,2	5,42	561,30
1891			75,8	5,17	541,22
1892			85,8	4,86	483,28
1893			71,7	5,33	549,26
1894			86,6	5,34	533,29
1895			54,1	4,43	423,28
1896			47,7	5,16	539,26
1897			74,6	4,44	509,30
1898			77,6	4,2	517,27
1899			38,8	4,53	568,26
1900			80,1	4,5	576,3

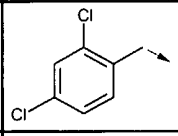
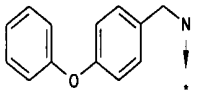
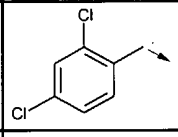
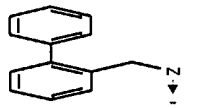
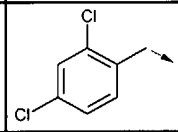
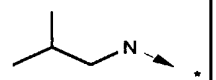
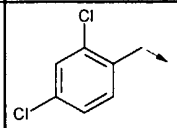
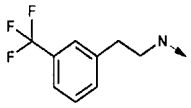
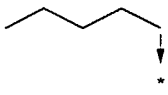
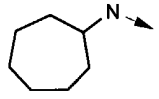
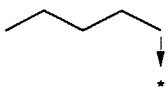
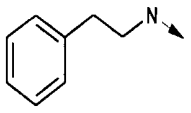
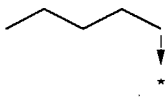
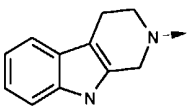
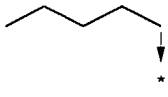
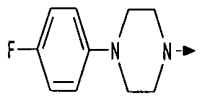
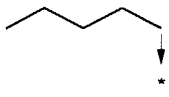
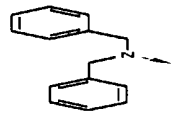
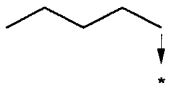
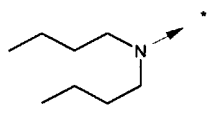
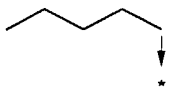
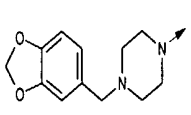
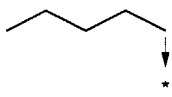
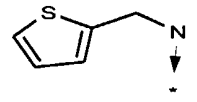


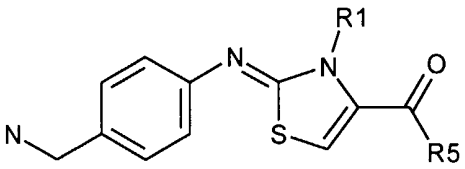
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1901			72,3	5,17	593,30
1902			77,0	4,88	525,34
1903			80,5	3,3	616,3
1904			34,6	4,03	509,21
1905			81,3	3,6	576,2
1906			77,1	5,04	607,31
1907			79,6	4,76	587,24
1908			77,8	4,38	529,28
1909			78,0	4,95	595,28
1910			81,1	4,88	579,29
1911			32,4	3,89	469,29
1912			49,3	4,7	585,26

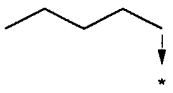
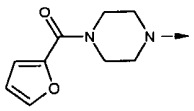
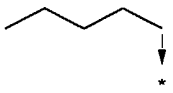
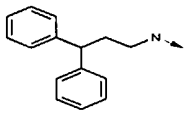
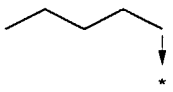
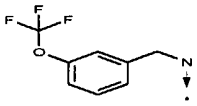
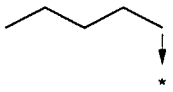
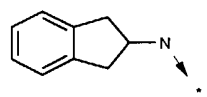
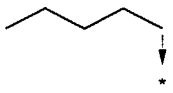
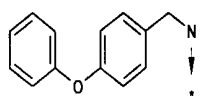
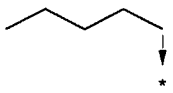
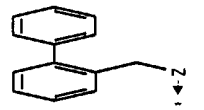
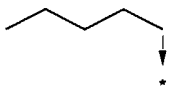
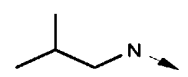
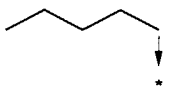
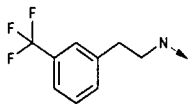


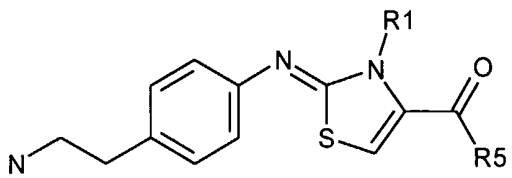
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1913			87,0	5,59	503,20
1914			88,5	5,3	511,15
1915			69,5	5,28	562,16
1916			89,4	5,3	570,1
1917			79,1	5,98	587,17
1918			82,4	5,84	519,23
1919			89,5	3,9	610,1
1920			27,2	5,12	503,11
1921			88,6	4,41	570,13
1922			86,4	5,91	601,19
1923			84,9	5,66	581,11
1924			86,4	5,44	523,13

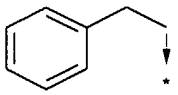
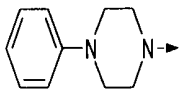
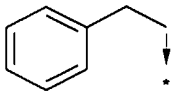
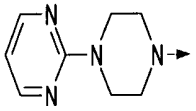
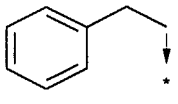
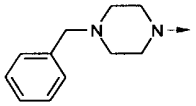
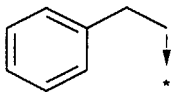
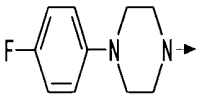
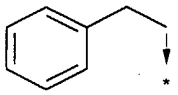
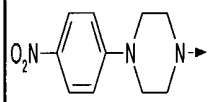
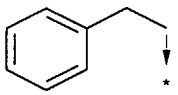
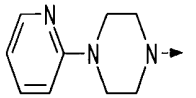
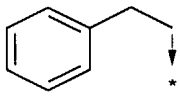
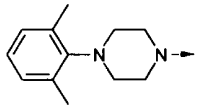
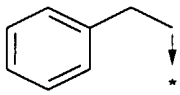
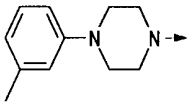
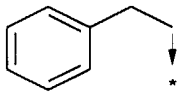
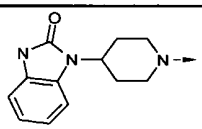
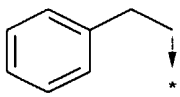
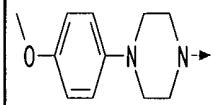
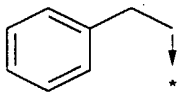
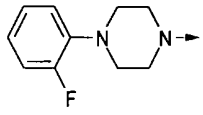
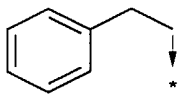
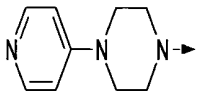


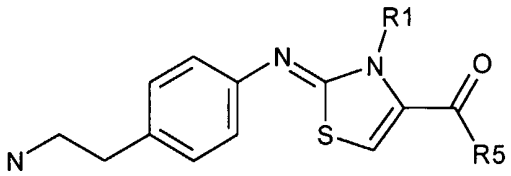
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1925			61,9	5,81	589,16
1926			84,7	5,85	573,15
1927			36,8	5,1	463,16
1928			76,4	5,68	579,13
1929			79,4	4,65	415,30
1930			84,5	4,41	423,29
1931			44,0	4,62	474,29
1932			86,1	4,65	482,3
1933			78,5	5,33	499,31
1934			79,6	5,06	431,33
1935			84,6	3,4	522,30
1936			54,6	4,2	415,21

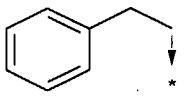
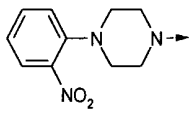
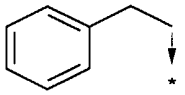
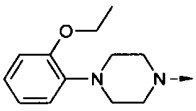
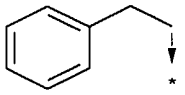
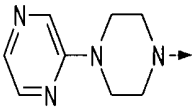
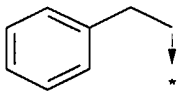
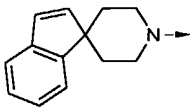
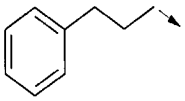
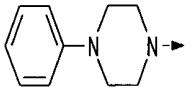
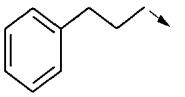
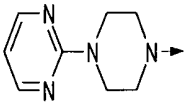
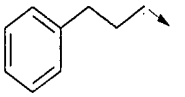
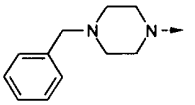
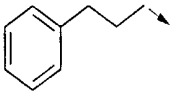
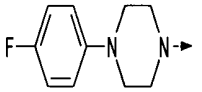
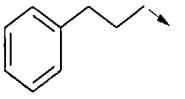
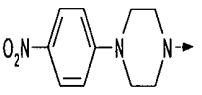
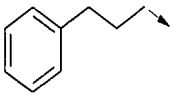
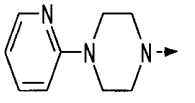
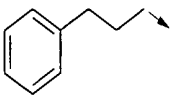
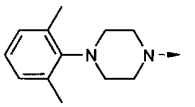
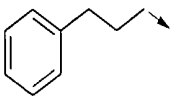
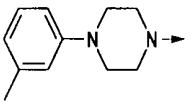


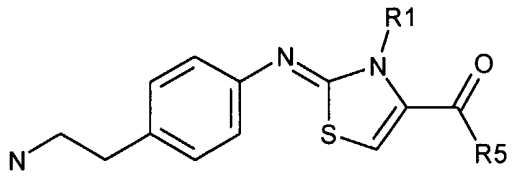
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1937			85,4	3,7	482,29
1938			83,5	5,21	513,32
1939			85,7	4,92	493,24
1940			83,0	4,58	435,29
1941			75,1	5,1	501,31
1942			88,2	5,1	485,31
1943			76,1	4,08	375,28
1944			81,1	4,9	491,28

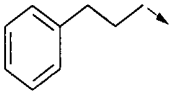
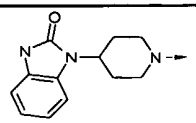
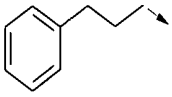
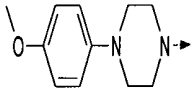
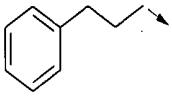
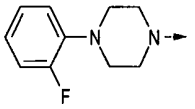
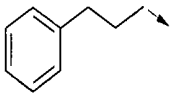
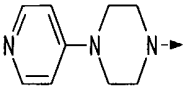
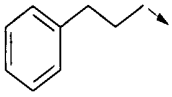
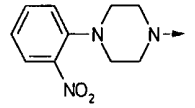
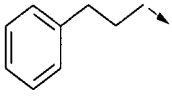
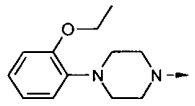
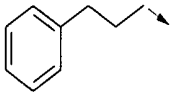
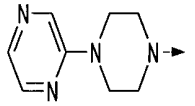
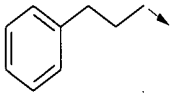
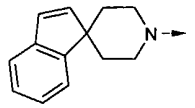
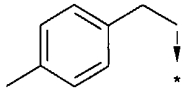
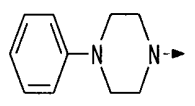
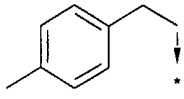
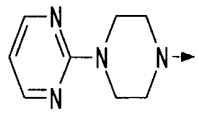
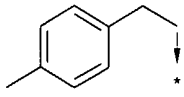
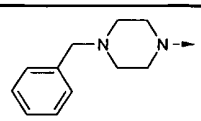
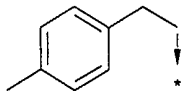
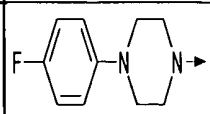


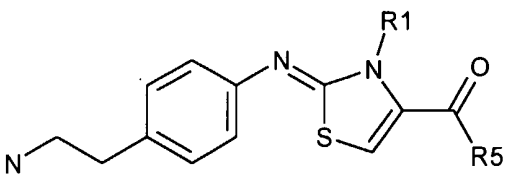
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1945			84,3	4,24	512,26
1946			85,4	3,63	514,25
1947			86,8	3,1	526,27
1948			87,7	4,32	530,23
1949			87,5	4,24	557,23
1950			88,8	2,9	513,26
1951			84,5	4,92	540,28
1952			87,7	4,49	526,27
1953			62,5	3,66	567,26
1954			89	4,08	542,26
1955			87,7	4,38	530,24
1956			82,4	2,7	513,28

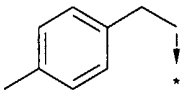
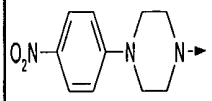
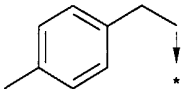
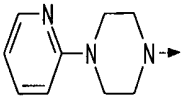
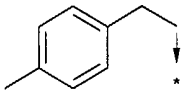
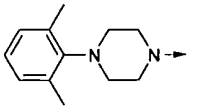
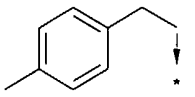
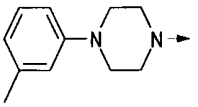
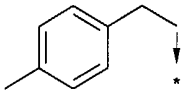
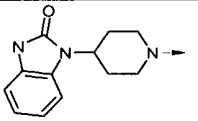
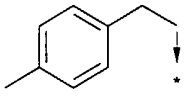
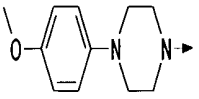
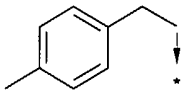
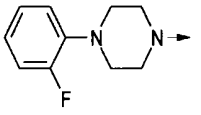
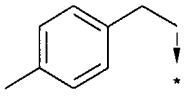
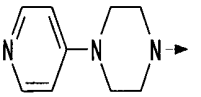
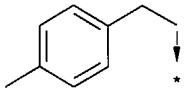
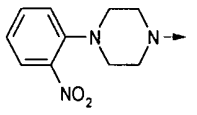
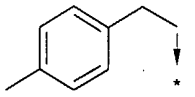
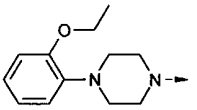
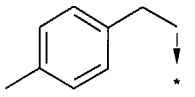
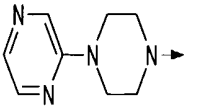
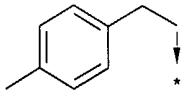
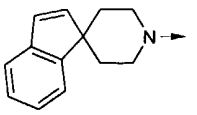


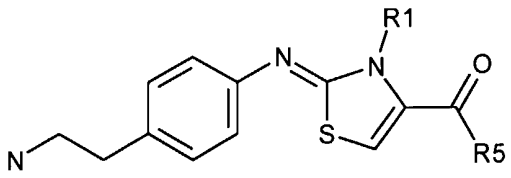
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1957			87,7	4,31	557,23
1958			91,0	4,44	556,27
1959			80,7	3,44	514,25
1960			68,6	4,67	535,24
1961			85,3	4,32	526,27
1962			83,0	3,75	528,25
1963			88,7	3,28	540,28
1964			86,8	4,37	544,25
1965			89,4	4,29	571,24
1966			86,9	3,1	527,25
1967			86,1	4,94	554,29
1968			87,6	4,54	540,27

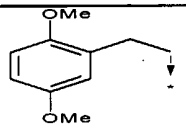
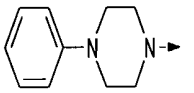
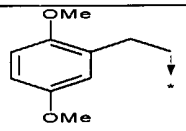
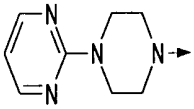
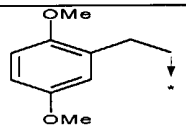
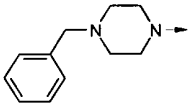
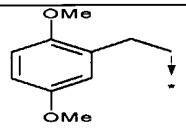
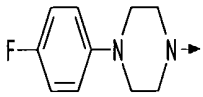
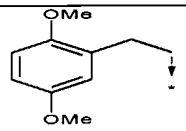
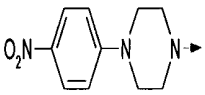
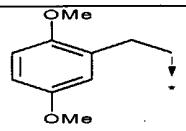
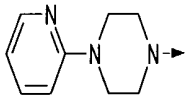
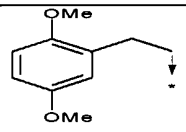
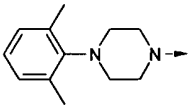
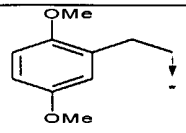
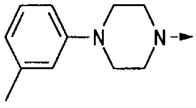
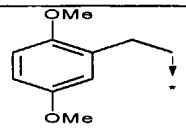
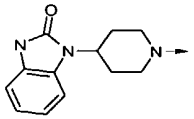
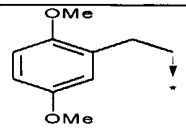
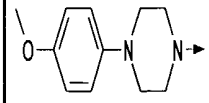
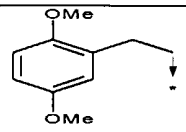
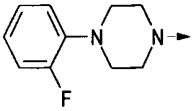
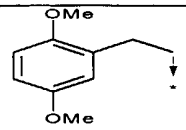
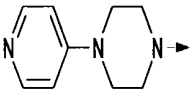


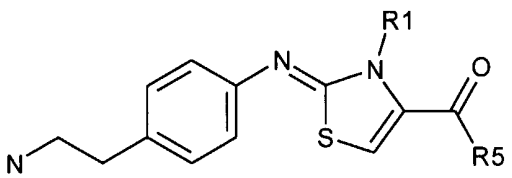
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1969			65,4	3,76	581,27
1970			86,3	4,16	556,28
1971			86,0	4,43	544,25
1972			83,2	2,8	527,3
1973			84,8	4,38	571,24
1974			87,8	4,5	570,28
1975			80,9	3,55	528,26
1976			62,7	4,71	549,27
1977			85,7	4,41	526,29
1978			84,2	3,82	528,27
1979			87,4	3,28	540,28
1980			86,6	4,47	544,24

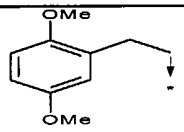
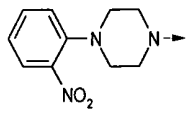
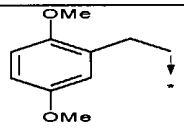
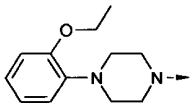
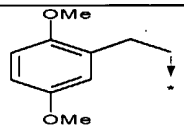
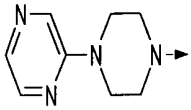
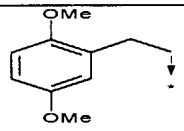
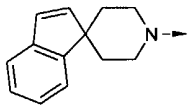
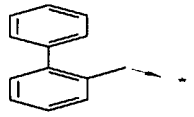
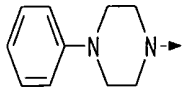
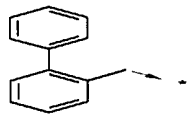
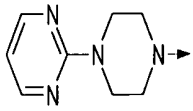
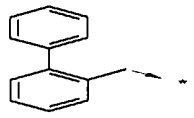
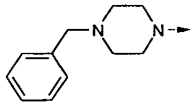
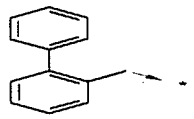
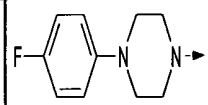
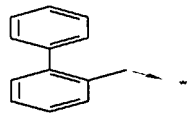
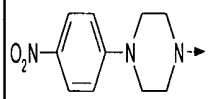
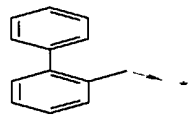
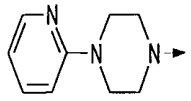
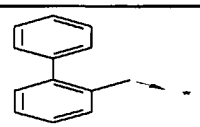
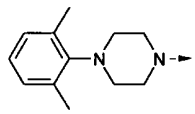
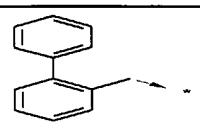
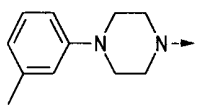


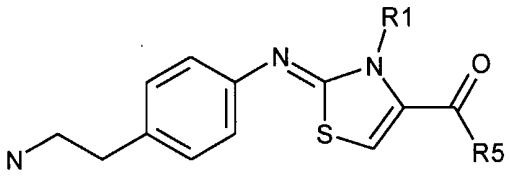
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1981			86,4	4,38	571,24
1982			85,9	3,1	527,27
1983			85,3	5,06	554,28
1984			85,3	4,66	540,28
1985			60,8	3,8	581,28
1986			86,1	4,25	556,28
1987			86,4	4,54	544,25
1988			75,9	2,86	527,28
1989			86,5	4,46	571,24
1990			88,4	4,6	570,29
1991			79,8	3,62	528,27
1992			63,2	4,82	549,26

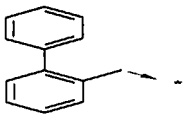
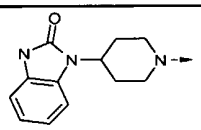
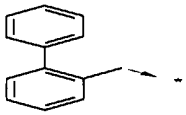
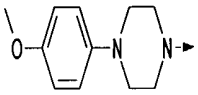
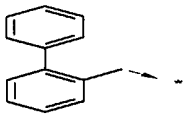
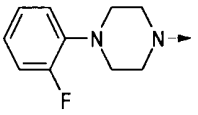
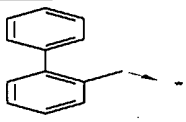
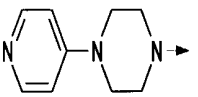
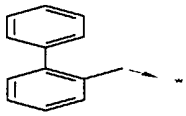
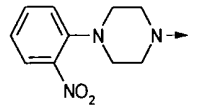
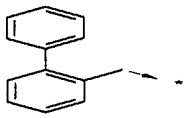
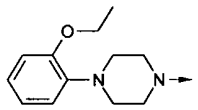
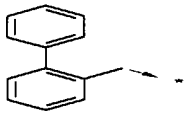
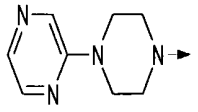
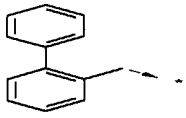
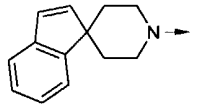


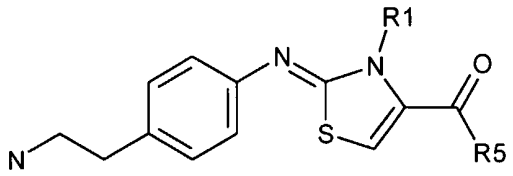
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
1993			81,8	4,15	572,25
1994			81,0	3,58	574,25
1995			83,5	3,08	586,3
1996			84,3	4,2	590,27
1997			85,3	4,12	617,26
1998			86,1	2,91	573,28
1999			85,5	4,74	600,31
2000			87,3	4,37	586,28
2001			68,4	3,6	627,28
2002			85,4	3,98	602,28
2003			83,1	4,26	590,27
2004			84,5	2,7	573,26

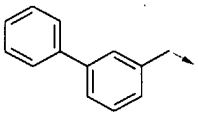
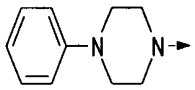
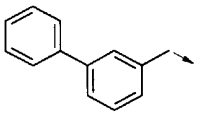
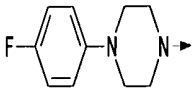
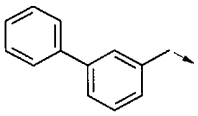
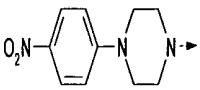
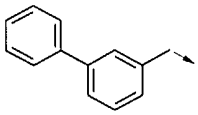
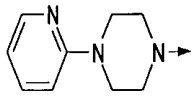
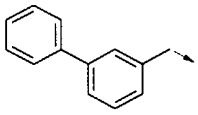
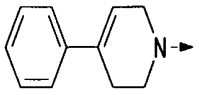
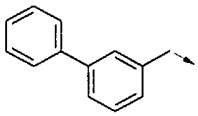
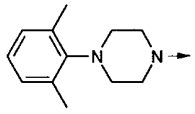
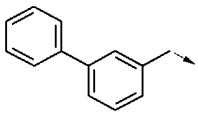
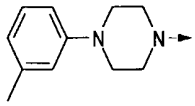
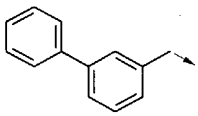
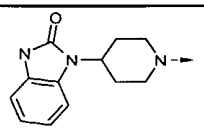
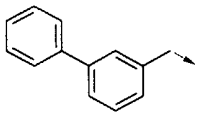
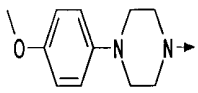
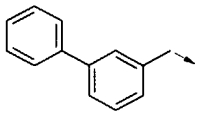
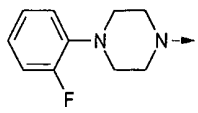
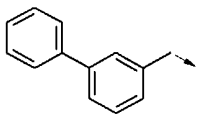
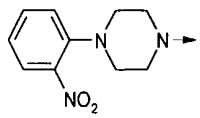
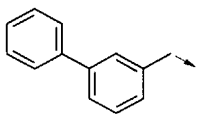
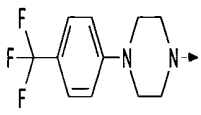


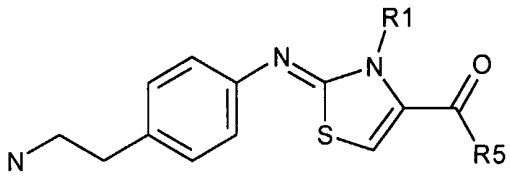
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
2005			85,9	4,2	617,27
2006			86,9	4,32	616,31
2007			81,2	3,4	574,24
2008			69,0	4,54	595,29
2009			82,1	4,72	574,25
2010			80,1	4,15	576,27
2011			83,9	3,53	588,27
2012			80,8	4,78	592,26
2013			83,0	4,68	619,26
2014			85,6	3,35	575,25
2015			82,9	5,41	602,30
2016			81,9	4,96	588,26

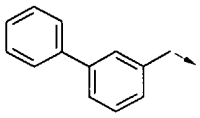
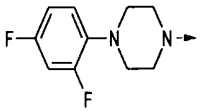
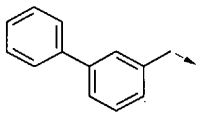
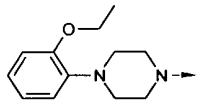
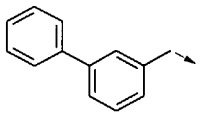
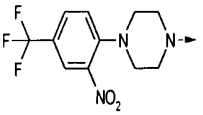
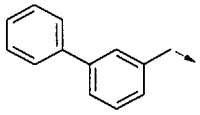
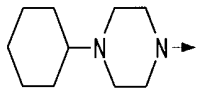
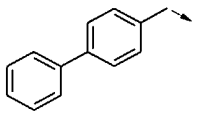
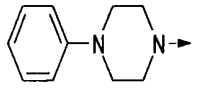
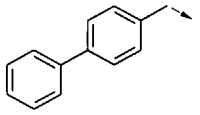
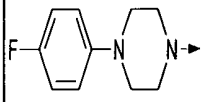
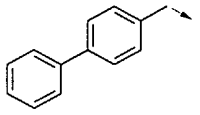
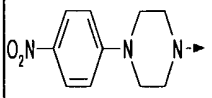
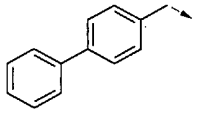
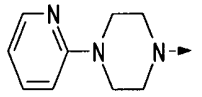
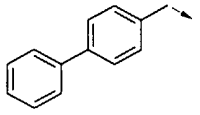
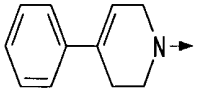
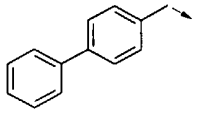
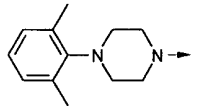
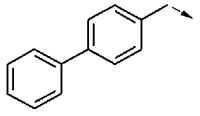
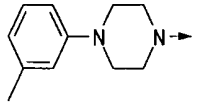
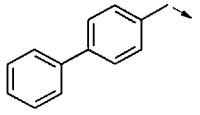
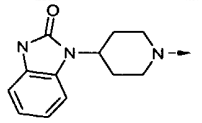


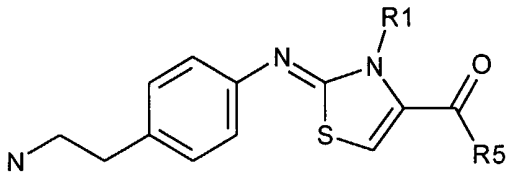
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
2017			58,6	4,09	629,29
2018			81,7	4,53	604,27
2019			81,4	4,84	592,26
2020			78,7	3,06	575,31
2021			83,9	4,74	619,25
2022			82,6	4,89	618,29
2023			79,5	3,9	576,27
2024			64,2	5,15	597,27

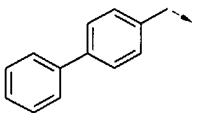
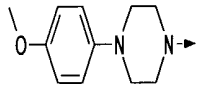
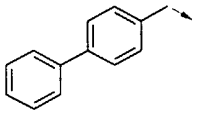
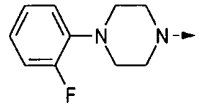
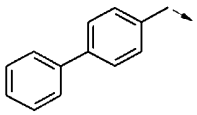
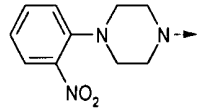
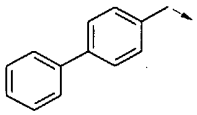
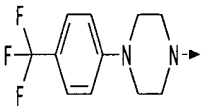
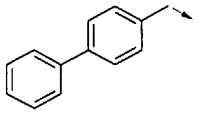
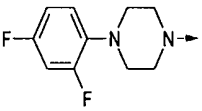
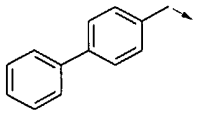
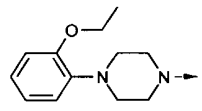
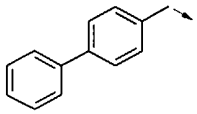
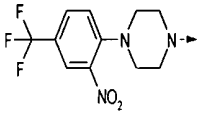
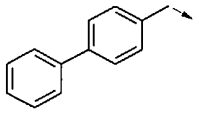
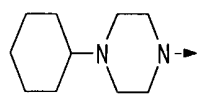
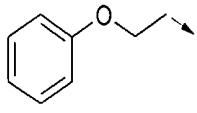
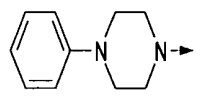
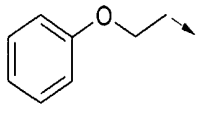
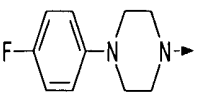
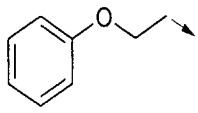
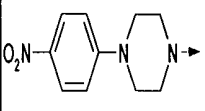
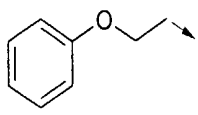
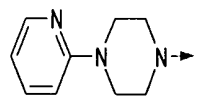


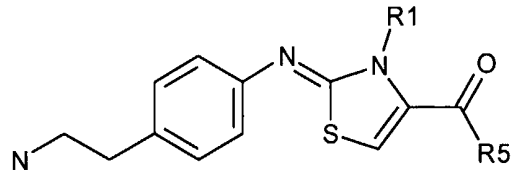
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
2025			88,8	4,94	574,23
2026			88,4	4,96	592,25
2027			87,7	4,86	619,24
2028			89,7	3,61	575,2
2029			70,4	5,13	571,25
2030			88,0	5,58	602,28
2031			87,8	5,15	588,26
2032			76,5	4,24	629,28
2033			88,8	4,7	604,27
2034			88,3	5,04	592,25
2035			89,5	4,96	619,24
2036			87,5	5,41	642,26

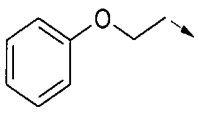
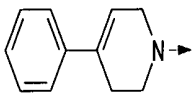
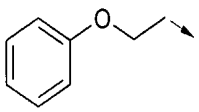
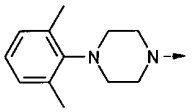
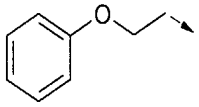
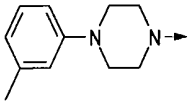
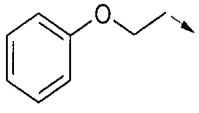
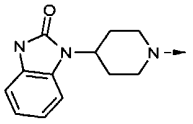
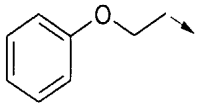
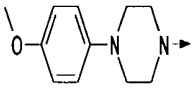
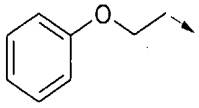
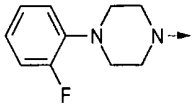
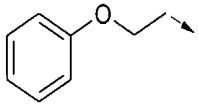
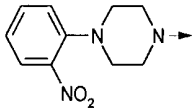
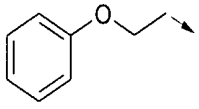
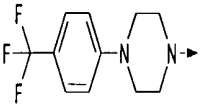
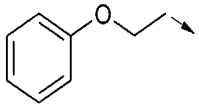
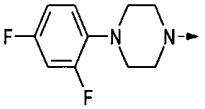
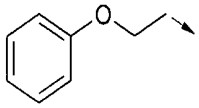
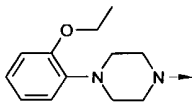
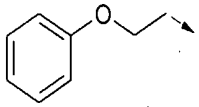
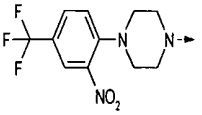
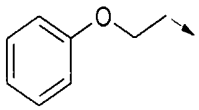
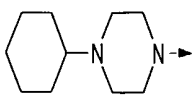


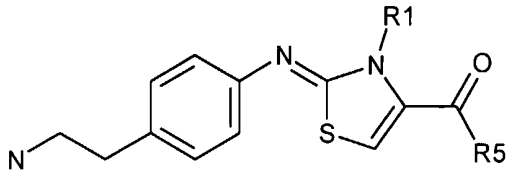
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
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2038			89,4	5,07	618,27
2039			88,7	5,42	687,24
2040			87,7	3,68	580,30
2041			85,2	4,89	574,23
2042			84,4	4,9	592,25
2043			84,7	4,78	619,23
2044			89,0	3,58	575,25
2045			61,5	5,16	571,22
2046			83,2	5,57	602,28
2047			84,4	5,1	588,25
2048			73,2	4,25	629,27

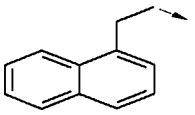
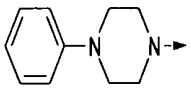
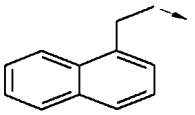
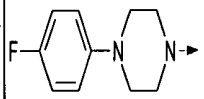
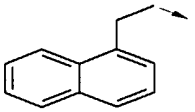
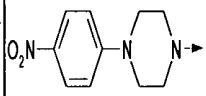
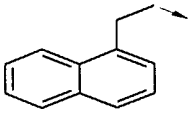
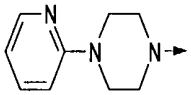
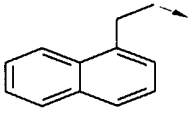
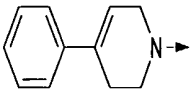
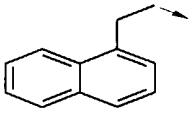
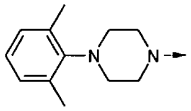
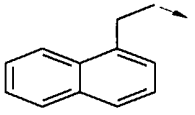
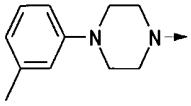
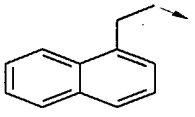
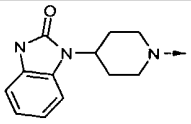
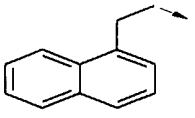
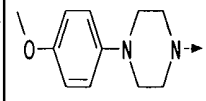
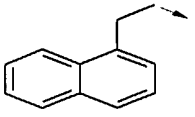
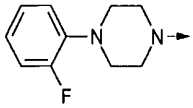
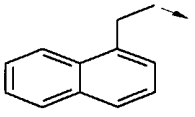
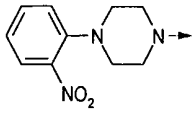
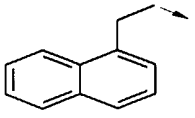
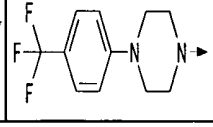


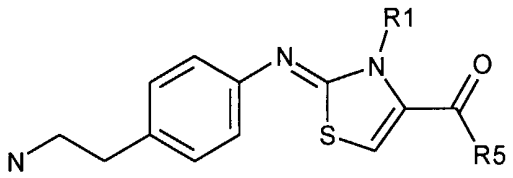
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
2049			85,5	4,64	604,26
2050			85,6	4,99	592,2
2051			85,7	4,93	619,24
2052			86,2	5,34	642,25
2053			85,1	5,06	610,23
2054			84,6	5,06	618,27
2055			85,4	5,37	687,23
2056			85,8	3,68	580,30
2057			68,0	4,37	528,26
2058			86,3	4,41	546,22
2059			88,1	4,32	573,19
2060			86,1	3	529,25

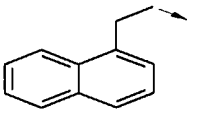
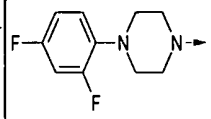
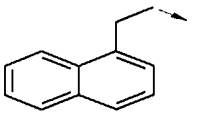
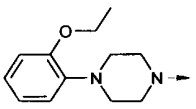
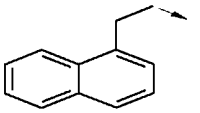
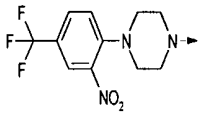
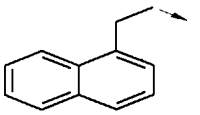
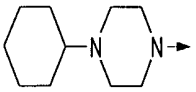
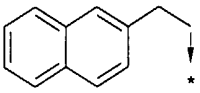
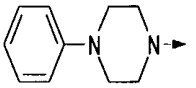
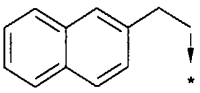
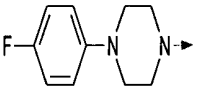
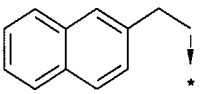
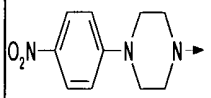
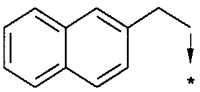
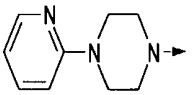
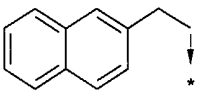
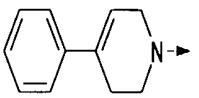
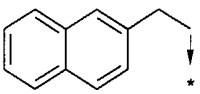
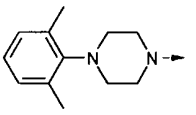
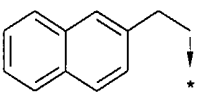
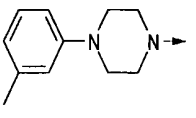
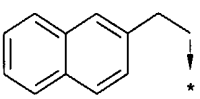
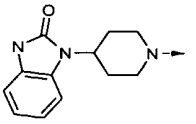


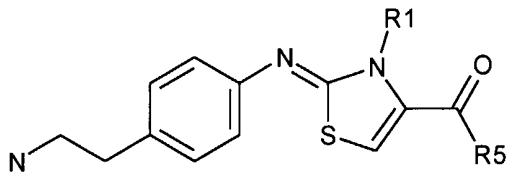
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
2061			67,2	4,56	525,25
2062			91,2	4,98	556,26
2063			87,8	4,56	542,26
2064			75,6	3,73	583,23
2065			88,7	4,16	558,23
2066			88,4	4,46	546,22
2067			87,4	4,4	573,20
2068			87,7	4,88	596,21
2069			87,9	4,56	564,21
2070			87,5	4,51	572,26
2071			88,8	4,91	641,20
2072			86,2	3,08	534,27

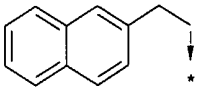
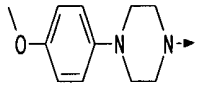
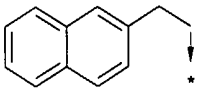
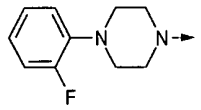
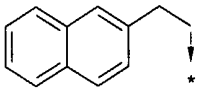
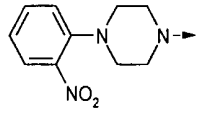
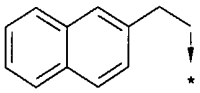
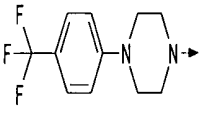
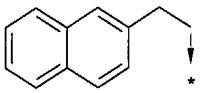
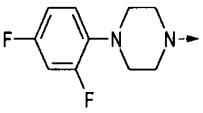
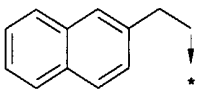
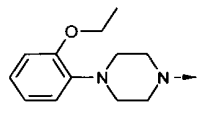
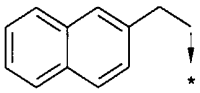
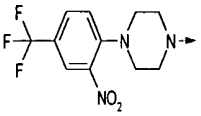
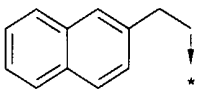
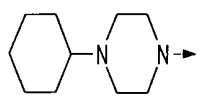


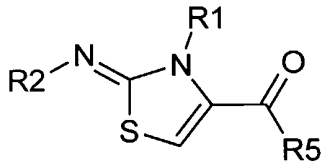
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
2073			71,7	4,78	562,25
2074			82,1	4,8	580,23
2075			82,6	4,68	607,23
2076			79,5	3,4	563,21
2077			67,5	4,92	559,23
2078			83,0	5,39	590,27
2079			82,5	4,98	576,26
2080			42,5	4,1	617,23
2081			86,9	4,58	592,26
2082			82,5	4,88	580,23
2083			81,4	4,77	607,23
2084			82,3	5,24	630,26

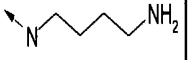
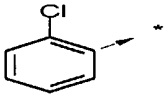
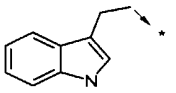
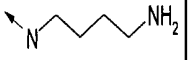
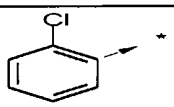
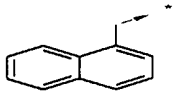
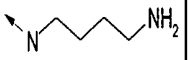
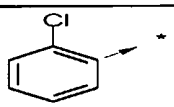
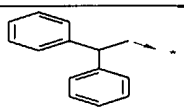
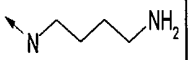
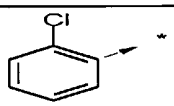
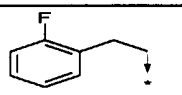
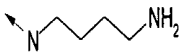
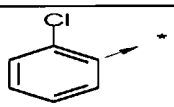
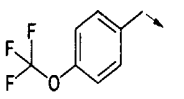
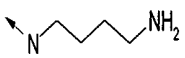
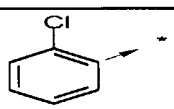
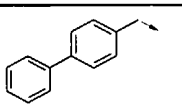
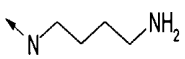
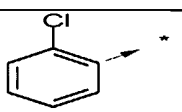
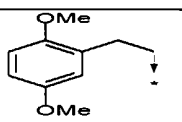
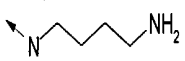
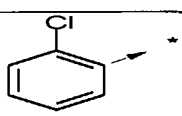
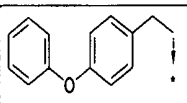
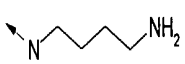
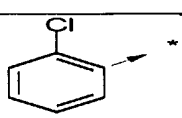
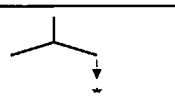
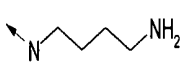
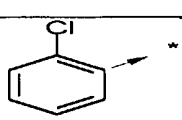
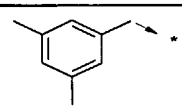
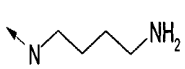
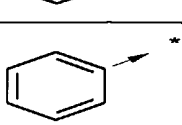
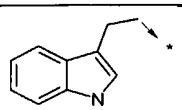
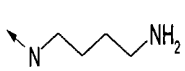
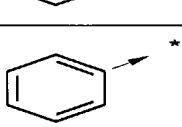
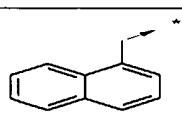
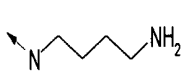
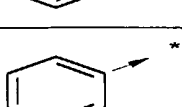
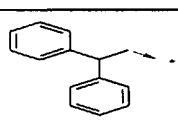


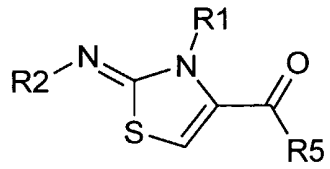
Ex.	R1	R5	Pureté (%)	tr (min.)	$[M+H]^+$
2085			83,5	4,97	598,20
2086			81,6	4,93	606,28
2087			82,7	5,25	675,23
2088			84,4	3,4	568,26
2089			67,0	4,64	562,24
2090			83,0	4,66	580,23
2091			83,6	4,54	607,22
2092			82,5	3,3	563,25
2093			84,2	4,8	559,22
2094			86,2	5,21	590,29
2095			83,2	4,82	576,28
2096			62,8	3,99	617,26

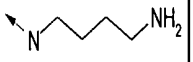
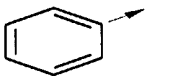
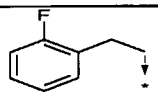
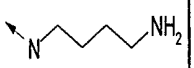
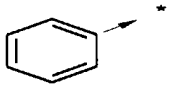
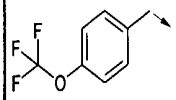
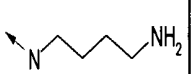
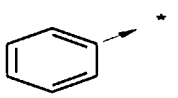
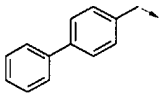
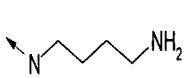
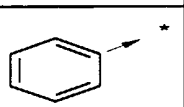
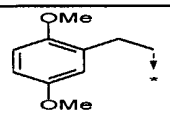
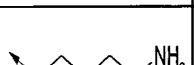
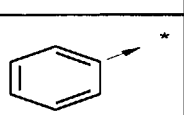
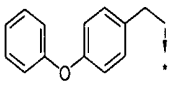
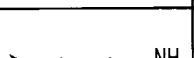
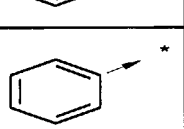
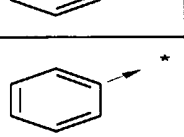
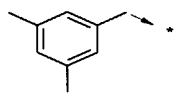
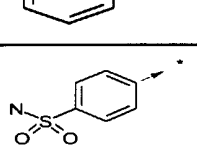
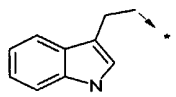
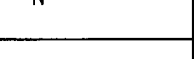
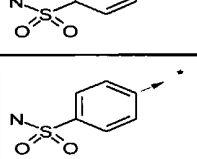
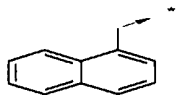
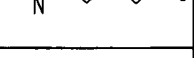
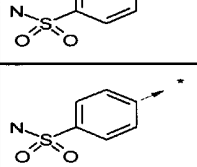
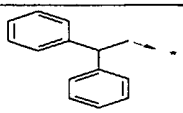
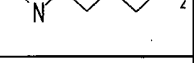
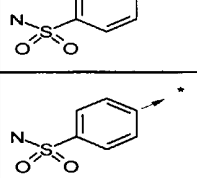
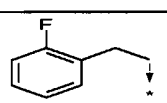
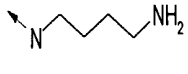
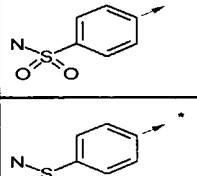
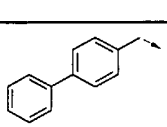
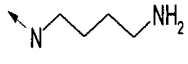
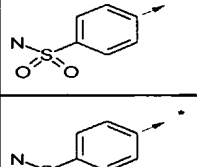
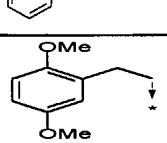


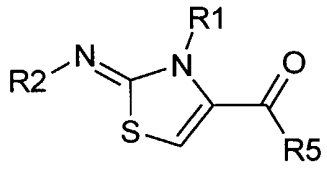
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2097			86,0	4,44	592,2
2098			85,8	4,72	580,25
2099			84,0	4,62	607,23
2100			83,4	5,09	630,26
2101			84,8	4,8	598,21
2102			83,7	4,78	606,29
2103			83,6	5,1	675,24
2104			5,6	3,05	568,28

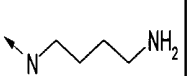
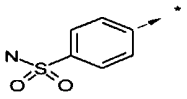
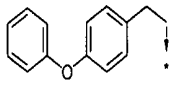
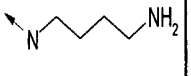
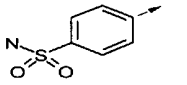
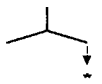
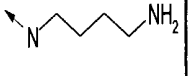
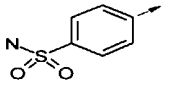
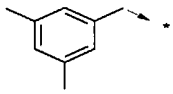
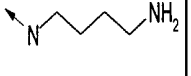
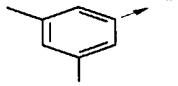
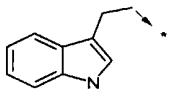
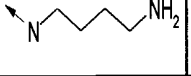
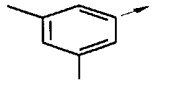
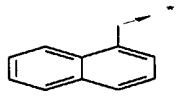
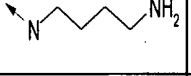
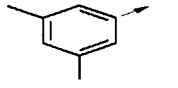
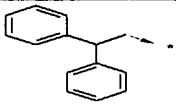
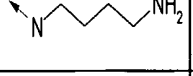
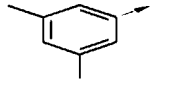
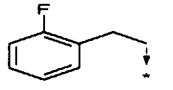
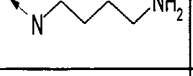
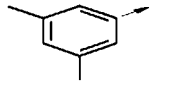
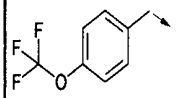
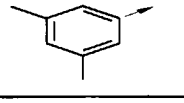
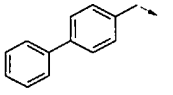
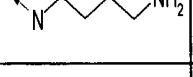
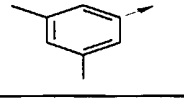
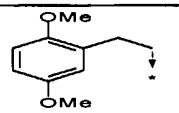
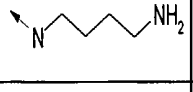
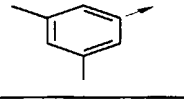
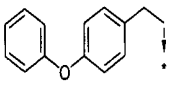
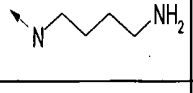
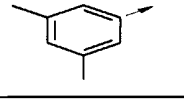
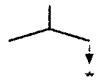
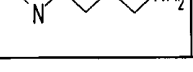
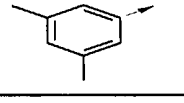
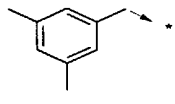


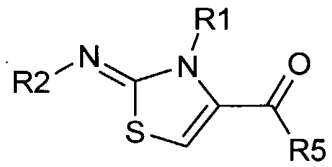
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2105				81,5	4,9	468,27
2106				81,4	5,01	465,28
2107				77,3	5,34	505,31
2108				73,5	4,7	447,29
2109				70,5	5,28	499,26
2110				73,9	5,38	491,30
2111				72,0	4,5	489,31
2112				73,0	5,5	521,29
2113				90,0	4,23	381,29
2114				76,1	5,02	443,30
2115				56,9	4,2	434,32
2116				79,8	4,29	431,31
2117				79,1	4,45	471,35

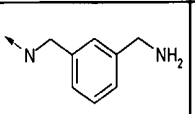
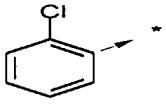
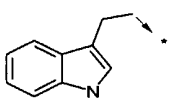
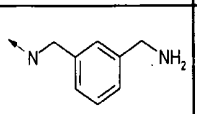
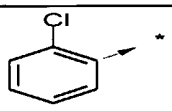
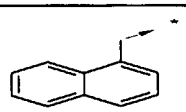
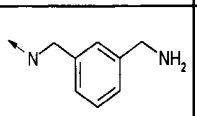
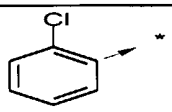
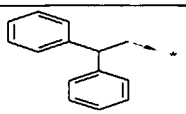
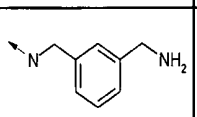
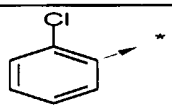
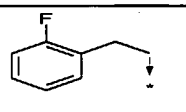
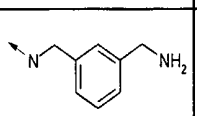
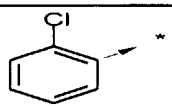
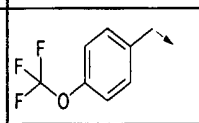
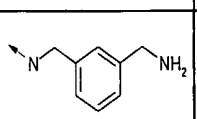
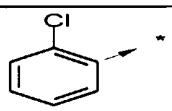
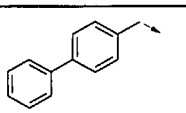
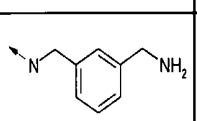
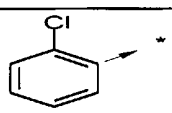
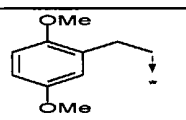
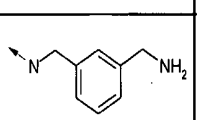
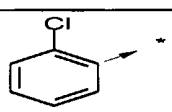
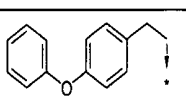
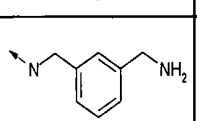
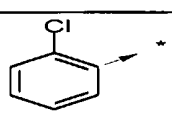
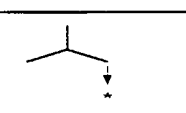
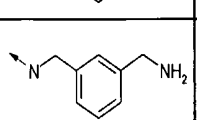
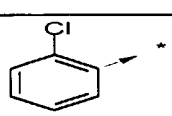
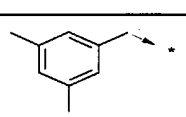
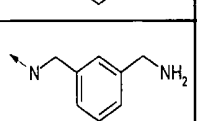
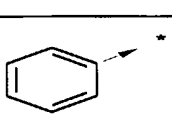
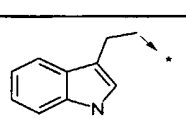
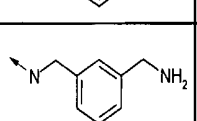
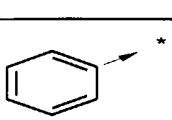
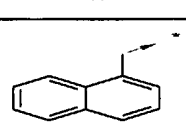
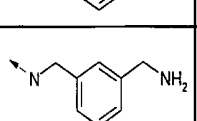
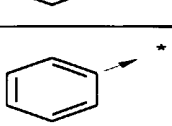
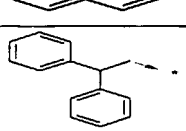


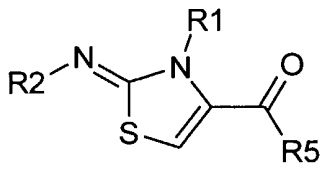
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2118				70,2	3,56	413,29
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2122				82,2	4,38	487,36
2123				68,8	2,99	347,34
2124				75,2	4,13	409,33
2125				56,9	4,01	513,30
2126				70,1	3,88	510,29
2127				77,8	4,16	550,29
2128				67,7	3,49	492,28
2129				71	4,27	536,28
2130				71,4	3,38	534,30

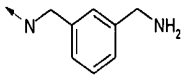
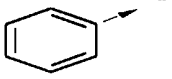
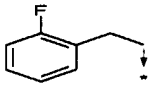
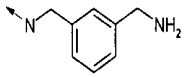
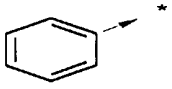
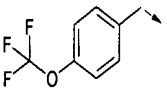
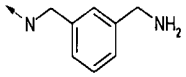
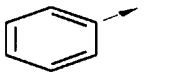
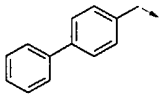
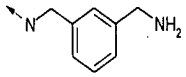
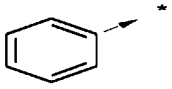
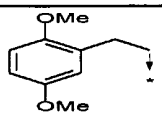
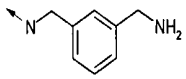
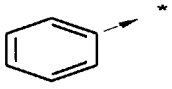
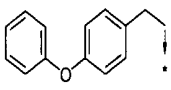
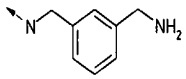
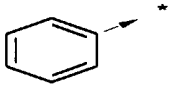
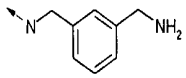
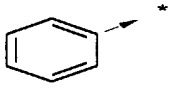
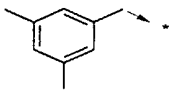
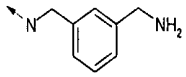
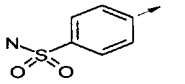
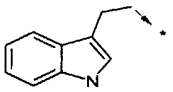
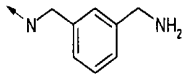
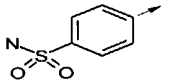
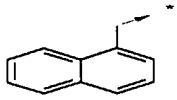
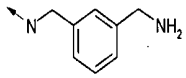
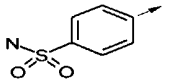
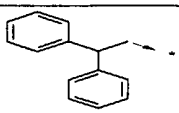
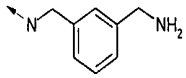
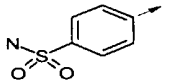
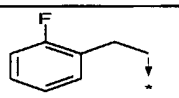
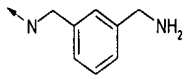
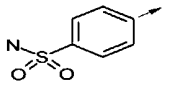
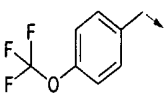
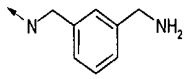
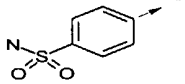
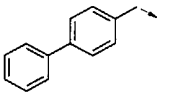


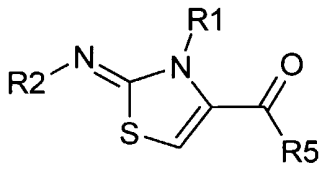
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2131				67,7	4,29	566,30
2132				54,5	2,98	426,29
2133				70,1	3,85	488,31
2134				57,1	4,5	462,36
2135				83,2	4,61	459,35
2136				91,6	4,72	499,40
2137				80,7	3,94	441,32
2138				73,9	4,99	493,32
2139				77,5	4,95	485,37
2140				77,4	3,79	483,36
2141				66,1	4,62	515,38
2142				70,1	3,49	375,33
2143				74,1	4,46	437,35

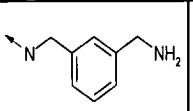
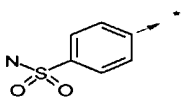
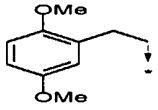
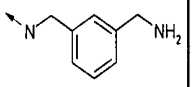
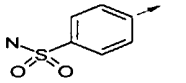
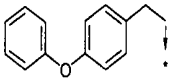
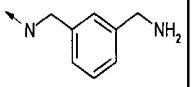
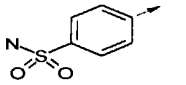
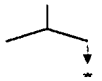
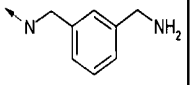
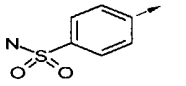
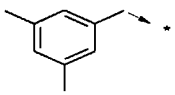
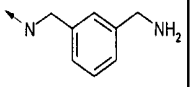
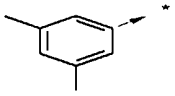
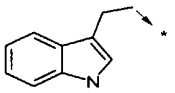
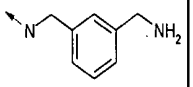
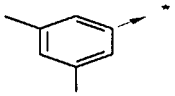
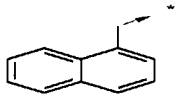
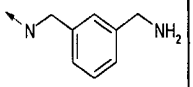
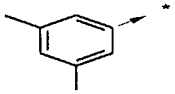
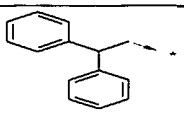
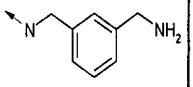
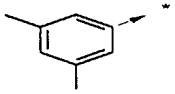
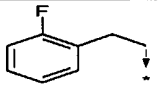
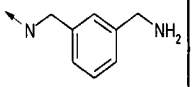
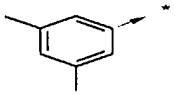
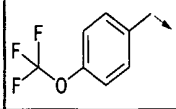
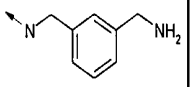
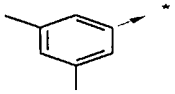
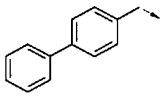
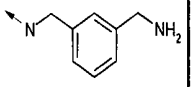
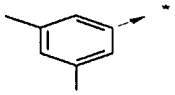
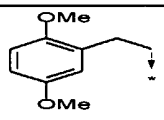
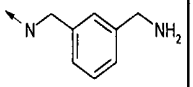
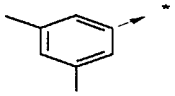
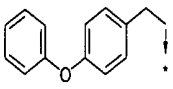
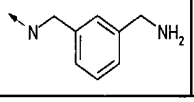
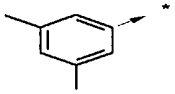
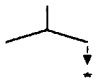


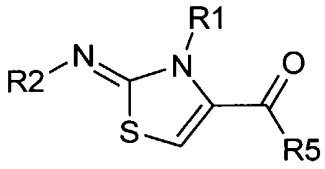
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2144				93,8	5,14	516,28
2145				90,0	5,27	513,28
2146				81,4	5,58	553,30
2147				78,6	5,02	495,27
2148				81,4	5,51	547,21
2149				85,5	5,62	539,29
2150				78,9	4,86	537,28
2151				83,2	5,76	569,28
2152				90,5	4,62	429,28
2153				91,8	5,31	491,31
2154				60,4	4,47	482,33
2155				83,6	4,62	479,31
2156				79,1	4,72	519,34

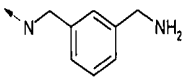
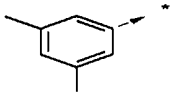
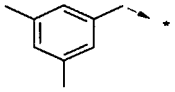


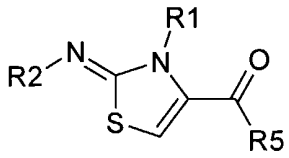
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2157				72,6	3,96	461,31
2158				75,7	5.0	513,27
2159				79,3	4,99	505,34
2160				89,6	3,72	503,34
2161				89,6	4,7	535,32
2162				73,5	3,38	395,32
2163				80,1	4,5	457,32
2164				58,8	4,24	561,29
2165				77,9	4,16	558,27
2166				85,5	4,42	598,29
2167				82,8	3,87	540,27
2168				1,54	4,52	592,25
2169				56,0	4,54	584,25

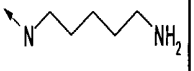
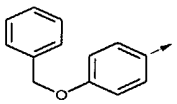
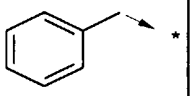
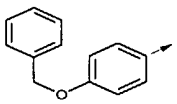
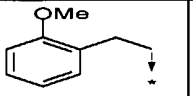
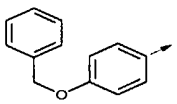
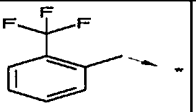
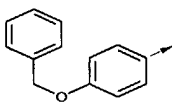
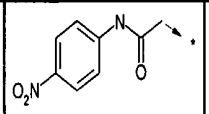
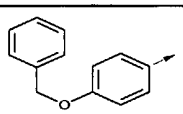
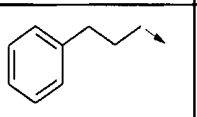
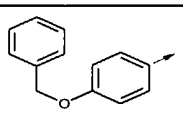
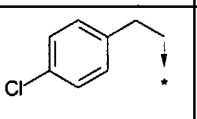
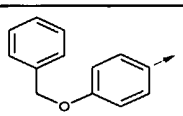
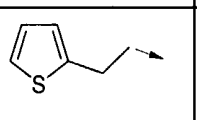
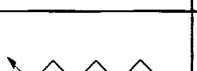
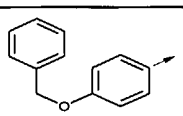
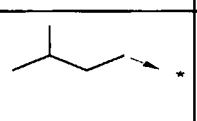
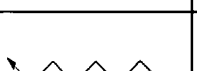
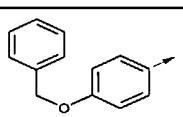
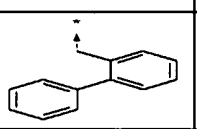
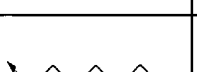
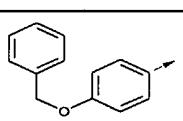
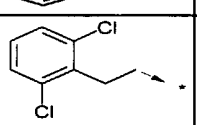
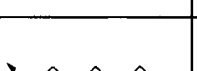
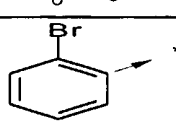
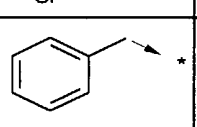
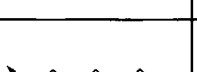
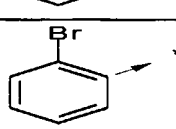
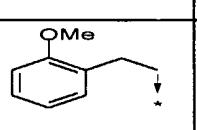
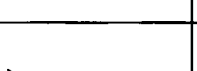
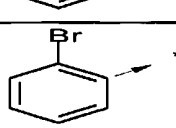
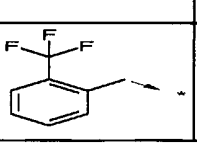


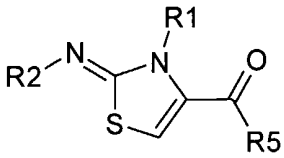
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
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2171				71,8	4,58	614,31
2172				71,9	3,43	474,30
2173				80,9	4,16	536,28
2174				61,9	4,76	510,36
2175				83,1	4,93	507,35
2176				92,0	4,99	547,36
2177				88,3	4,27	489,35
2178				86,3	5,41	541,29
2179				79,7	5,36	533,36
2180				82,5	4,13	531,35
2181				74,0	4,99	563,34
2182				76	3,89	423,35

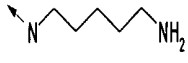
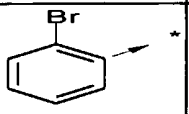
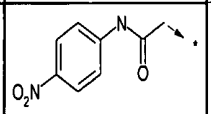
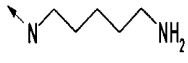
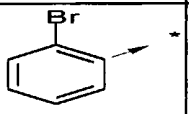
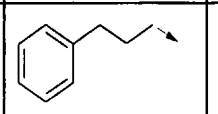
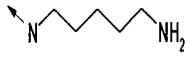
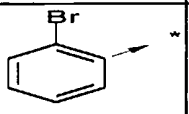
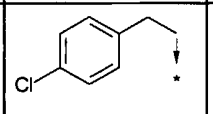
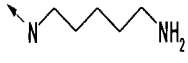
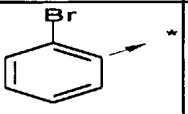
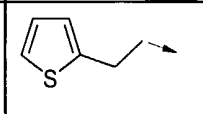
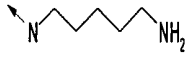
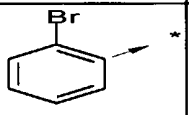
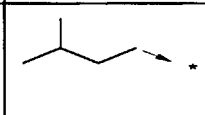
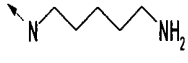
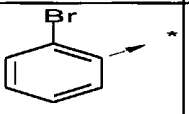
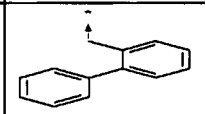
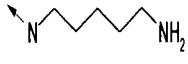
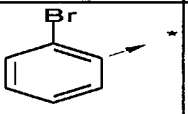
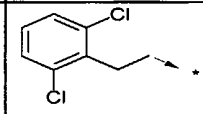
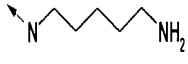
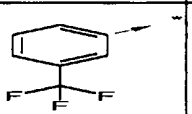
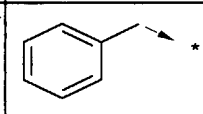
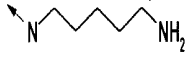
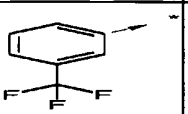
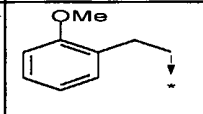
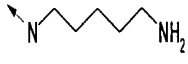
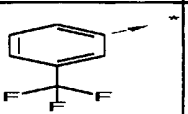
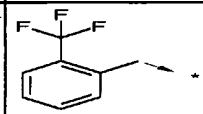
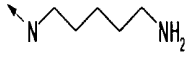
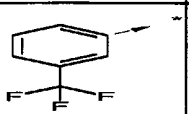
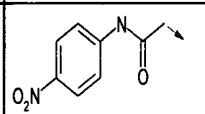
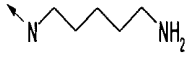
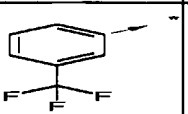
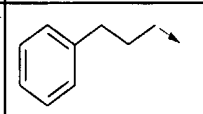
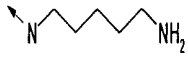
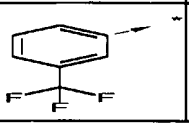
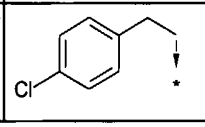


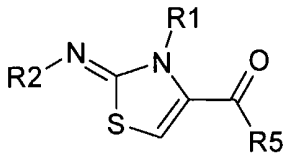
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2183				79,8	4,89	485,38

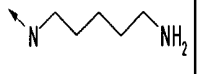
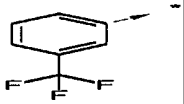
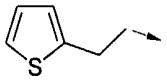
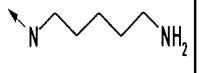
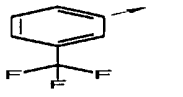
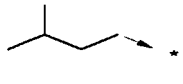
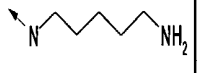
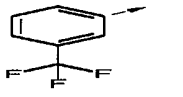
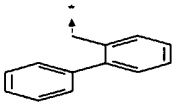
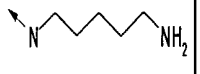
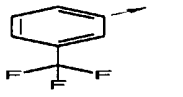
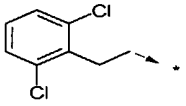
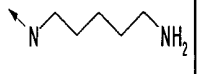
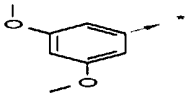
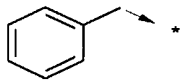
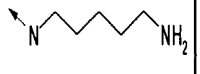
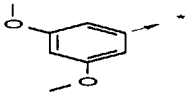
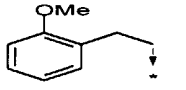
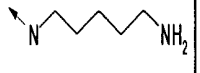
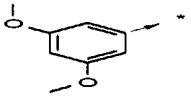
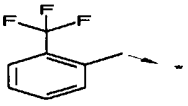
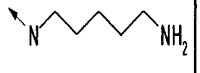
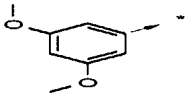
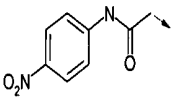
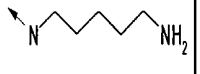
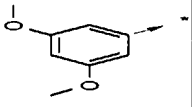
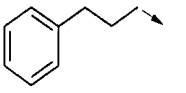
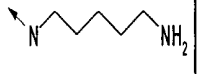
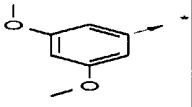
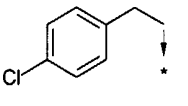
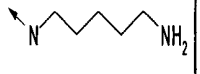
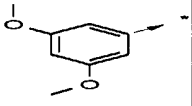
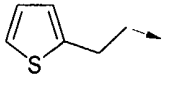
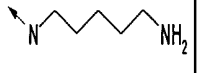
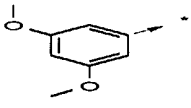
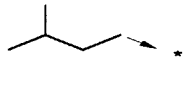
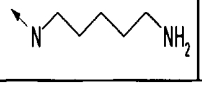
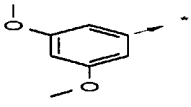
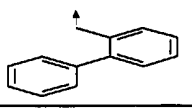


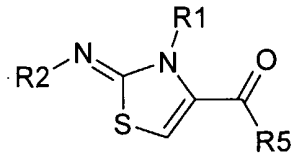
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2184				80,8	4,43	501,32
2185				66,2	4,18	545,31
2186				64,6	5,18	569,27
2187				57,2	4,78	589,30
2188				65,7	4,41	529,36
2189				65,4	4,52	549,28
2190				65,8	4,24	521,29
2191				71,4	4,19	481,37
2192				83,9	4,8	577,32
2193				76,5	4,54	583,24
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2195				66,6	4,69	517,20
2196				71	5,2	541,18

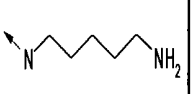
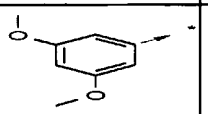
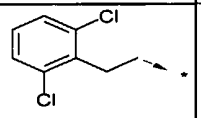
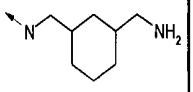
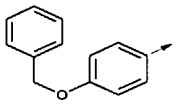
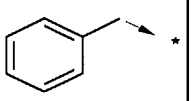
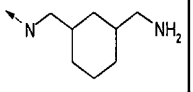
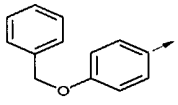
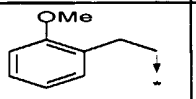
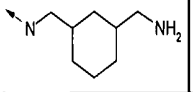
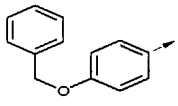
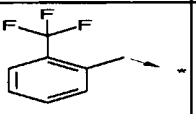
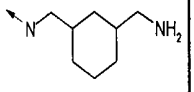
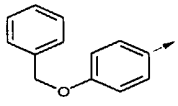
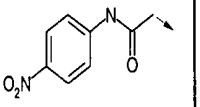
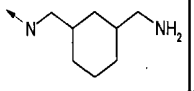
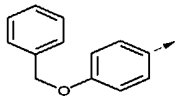
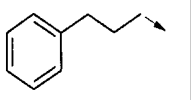
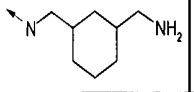
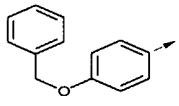
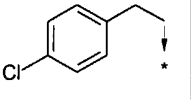
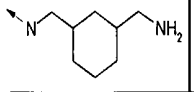
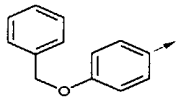
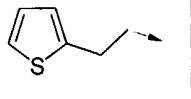
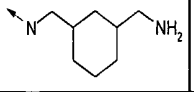
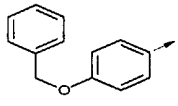
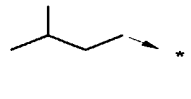
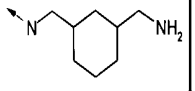
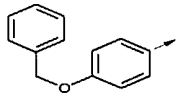
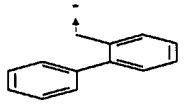
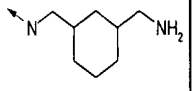
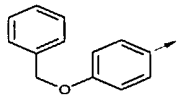
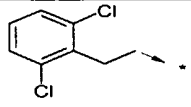
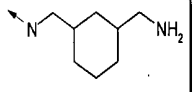
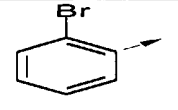
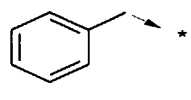
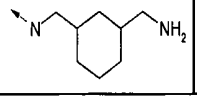
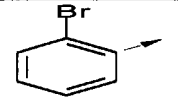
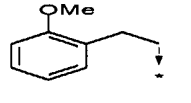


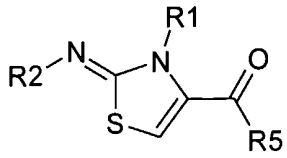
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2197				69	4,73	561,15
2198				74,8	5,04	501,24
2199				69,5	5,18	521,16
2200				79,3	4,8	493,18
2201				74,9	4,79	453,24
2202				68,9	5,41	549,20
2203				68	5,2	555,11
2204				66	5,02	463,27
2205				62,2	4,83	507,28
2206				65,2	5,48	531,24
2207				66,3	4,99	551,22
2208				72,9	5,22	491,31
2209				77,2	5,31	511,24

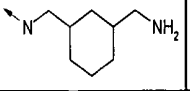
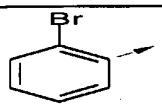
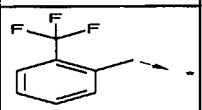
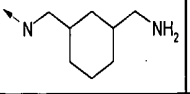
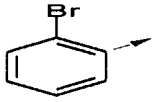
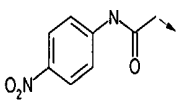
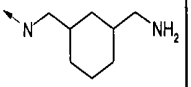
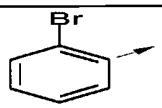
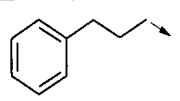
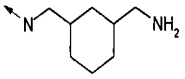
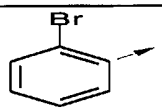
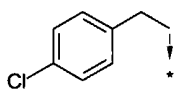
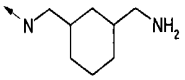
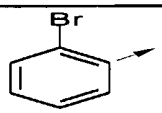
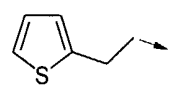
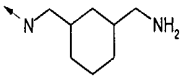
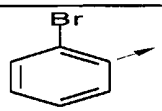
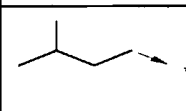
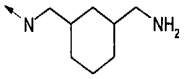
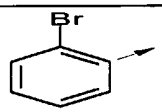
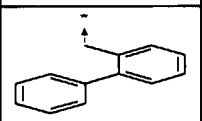
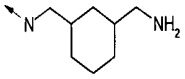
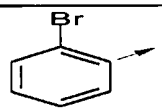
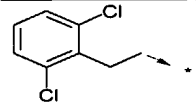
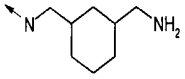
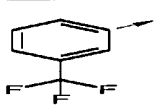
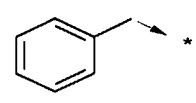
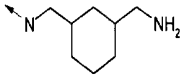
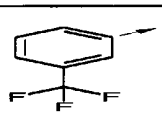
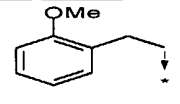
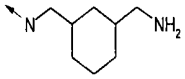
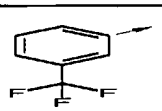
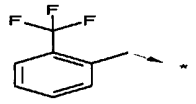
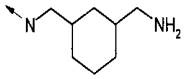
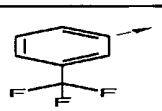
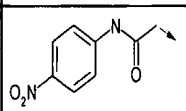
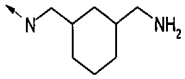
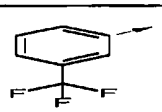
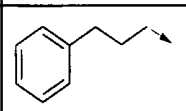


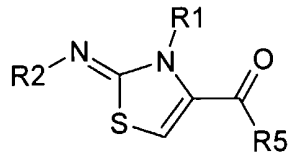
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2210				62,8	4,98	483,24
2211				62,4	4,98	443,31
2212				69,6	5,55	539,29
2213				63,5	5,41	545,19
2214				41,2	4,09	455,28
2215				58,5	3,73	499,35
2216				68,8	4,78	523,28
2217				36,2	4,37	543,28
2218				42,9	4,1	483,36
2219				46,1	4,24	503,30
2220				48,4	3,87	475,28
2221				39	3,8	435,34
2222				48,3	4,55	531,30

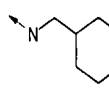
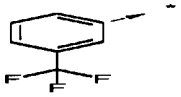
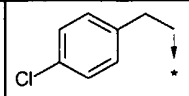
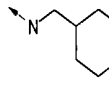
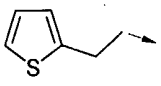
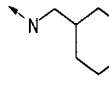
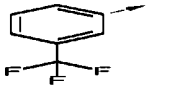
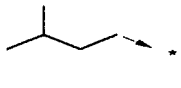
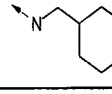
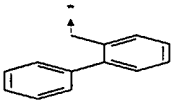
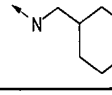
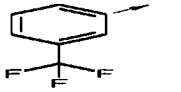
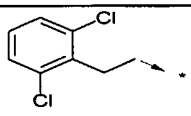
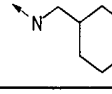
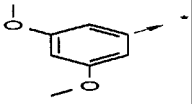
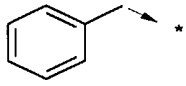
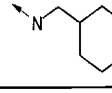
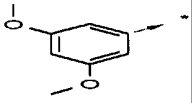
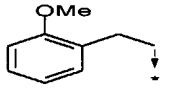
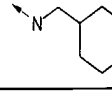
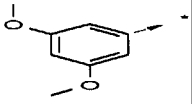
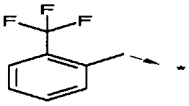
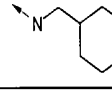
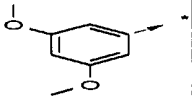
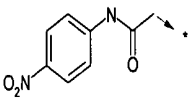
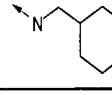
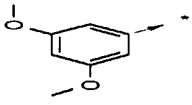
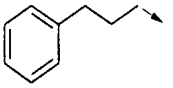
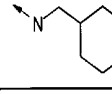
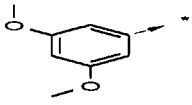
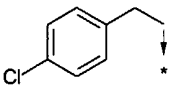
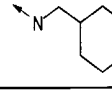
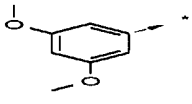
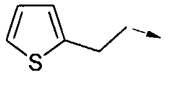
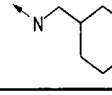
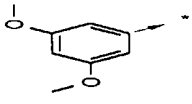
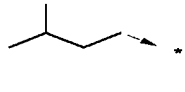


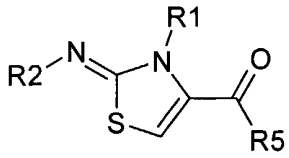
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2223				47	4,33	537,20
2224				57,4	4,64	541,34
2225				69,1	4,34	585,37
2226				64,6	5,36	609,35
2227				40,2	4,94	629,34
2228				62,6	4,57	569,3
2229				68	4,72	589,31
2230				61,2	4,44	561,31
2231				61,2	4,37	521,36
2232				80,7	5,02	617,37
2233				74,2	4,77	623,28
2234				68,1	4,99	513,23
2235				66,1	4,98	557,22

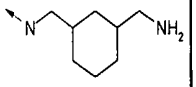
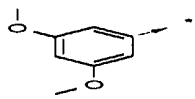
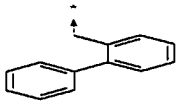
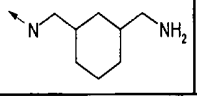
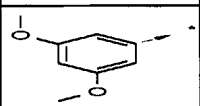
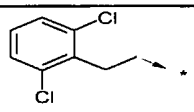


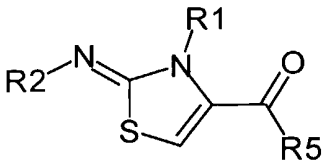
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
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2237				69,7	4,9	601,19
2238				67,1	5,27	541,23
2239				72,6	5,45	561,16
2240				75,6	5,09	533,17
2241				74,6	5,08	493,26
2242				74,2	5,6	589,22
2243				70	5,48	595,14
2244				63,2	5,24	503,32
2245				61,1	5,1	547,30
2246				63,3	5,65	571,25
2247				63,7	5,15	591,28
2248				67,2	5,46	531,31

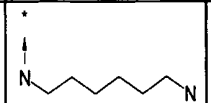
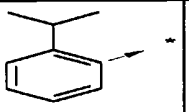
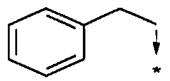
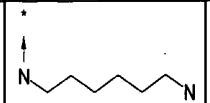
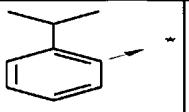
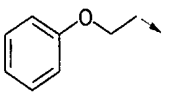
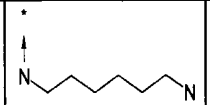
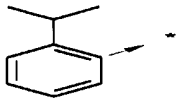
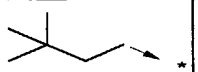
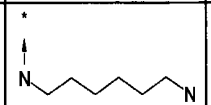
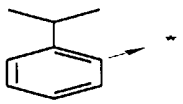
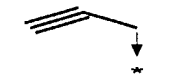
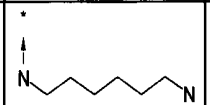
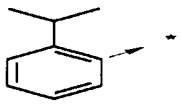
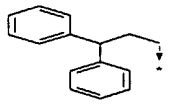
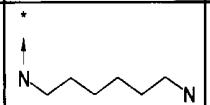
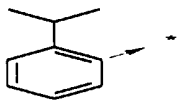
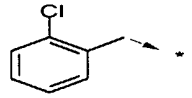
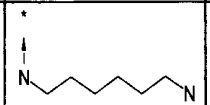
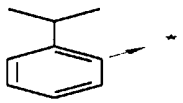
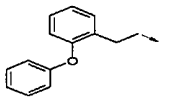
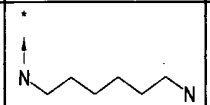
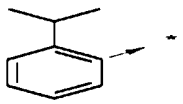
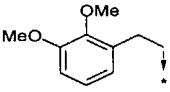
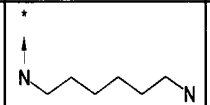
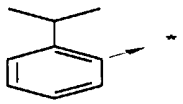
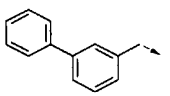
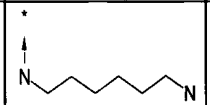
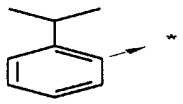
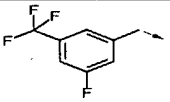
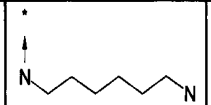
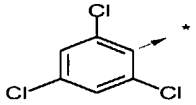
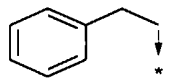
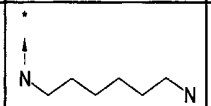
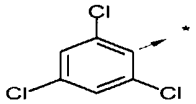
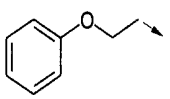
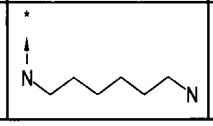
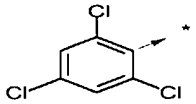
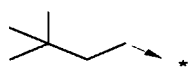


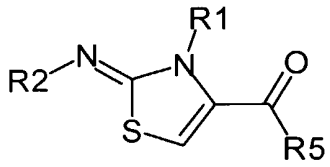
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2249				76	5,58	551,24
2250				60,2	5,25	523,26
2251				58,8	5,24	483,3
2252				72,1	5,76	579,31
2253				65,2	5,66	585,20
2254				36	4,36	495,33
2255				58,6	3,97	539,36
2256				70	5.0	563,28
2257				50,2	4,55	583,28
2258				43,2	4,34	523,35
2259				52	4,53	543,29
2260				52,1	4,16	515,30
2261				46,2	4,07	475,38

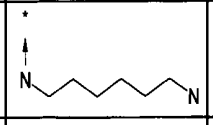
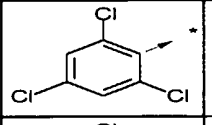
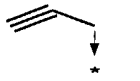
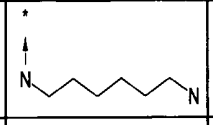
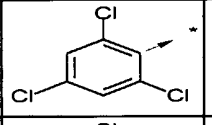
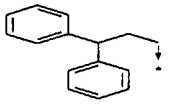
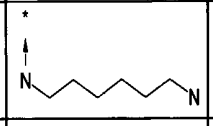
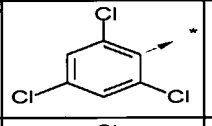
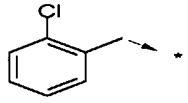
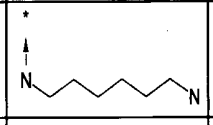
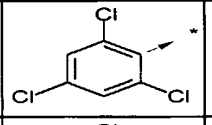
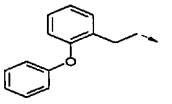
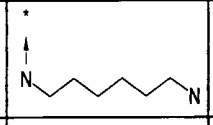
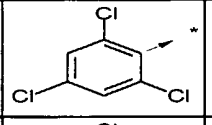
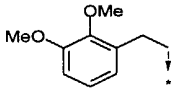
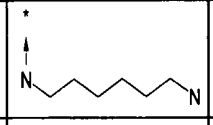
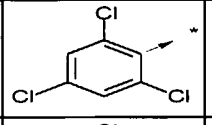
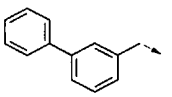
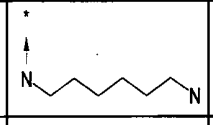
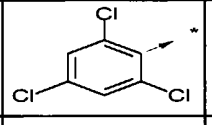
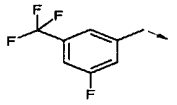
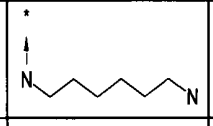
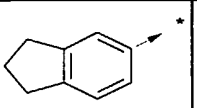
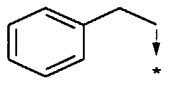
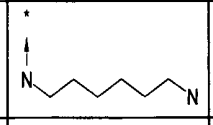
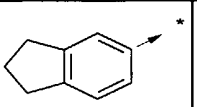
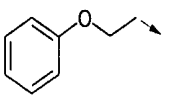
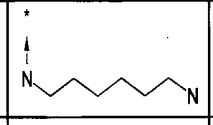
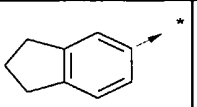
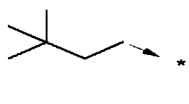
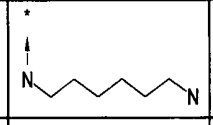
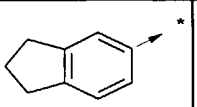
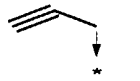
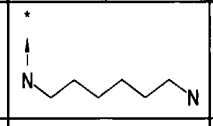
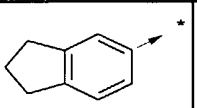
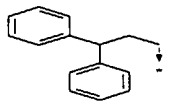
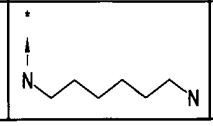
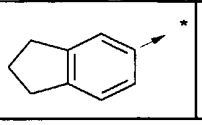
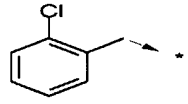


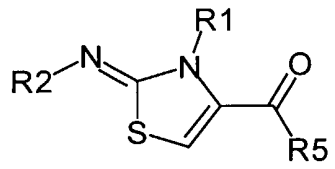
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2262				55,2	4,82	571,33
2263				51,5	4,63	577,22

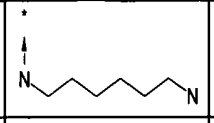
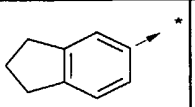
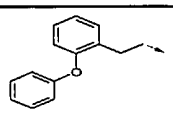
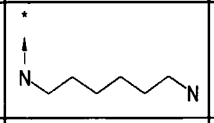
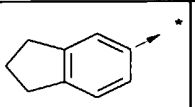
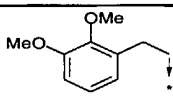
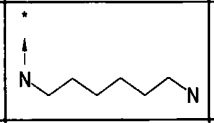
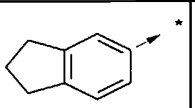
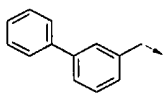
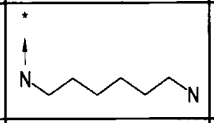
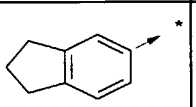
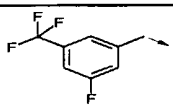
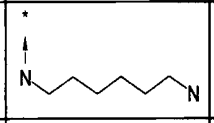
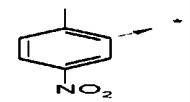
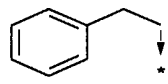
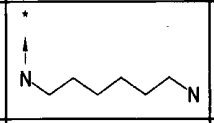
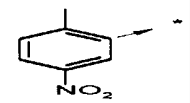
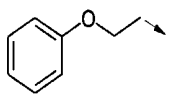
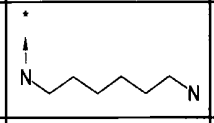
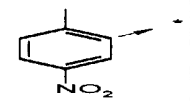
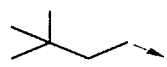
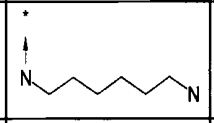
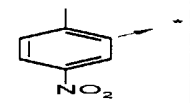
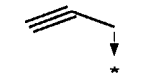
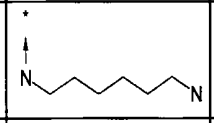
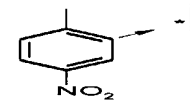
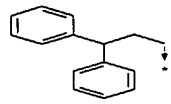
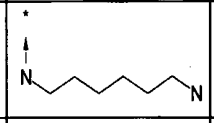
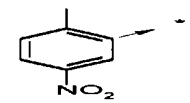
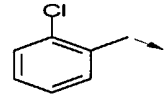
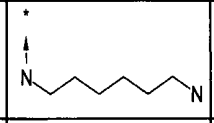
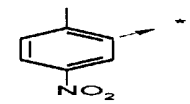
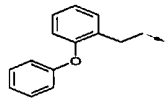
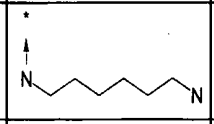
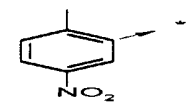
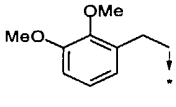
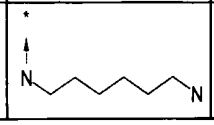
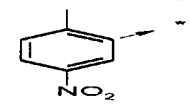
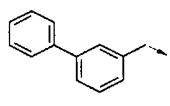


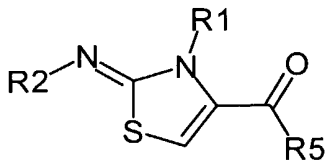
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2264				81,1	4,49	465,35
2265				84,1	4,7	481,36
2266				65,7	4,78	445,36
2267				63,0	4,51	399,29
2268				77,8	5,39	555,37
2269				78,5	5,21	485,32
2270				74,0	5,02	557,37
2271				78,1	4,38	525,37
2272				89,2	5,42	527,38
2273				83,0	5,75	537,30
2274				67,8	5,87	525,21
2275				83,2	5,75	541,16
2276				71,9	6,11	505,25

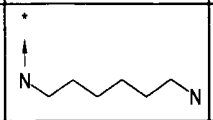
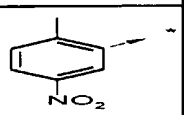
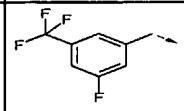
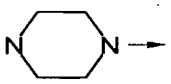
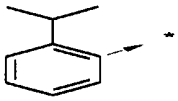
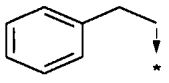
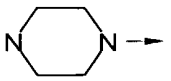
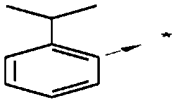
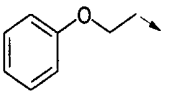
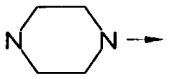
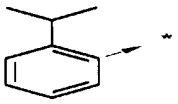
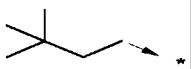
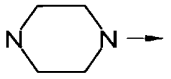
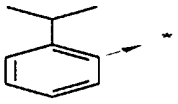
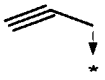
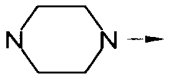
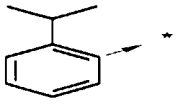
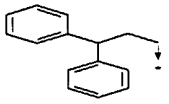
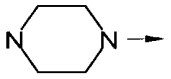
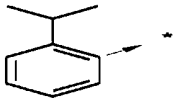
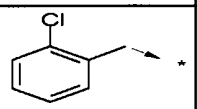
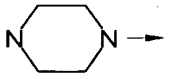
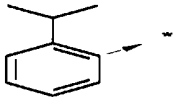
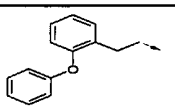
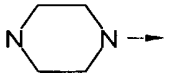
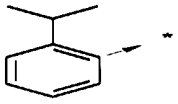
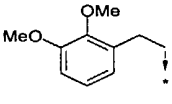
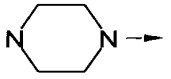
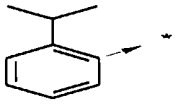
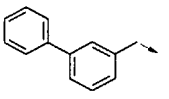
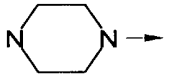
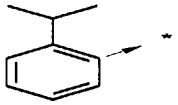
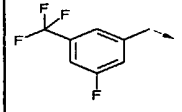
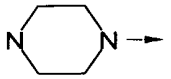
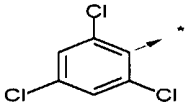
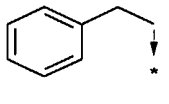
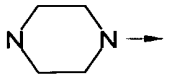
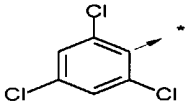
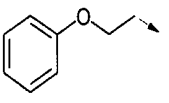


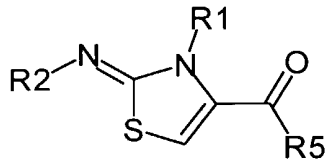
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2277				70,5	5,14	459,15
2278				74,6	6,44	615,23
2279				71,5	5,88	545,10
2280				80,2	6,43	617,19
2281				93,4	5,82	585,18
2282				74,9	6,28	587,19
2283				68,3	6,24	597,14
2284				65,8	4,02	463,35
2285				75,8	4,22	479,33
2286				69,0	4,21	443,37
2287				4,2	4,36	397,33
2288				82,7	4,74	553,37
2289				89,8	4,62	483,29

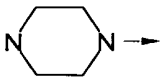
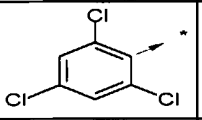
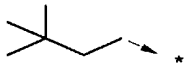
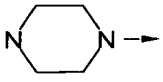
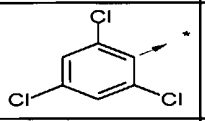
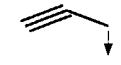
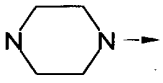
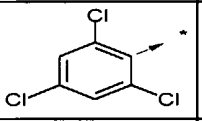
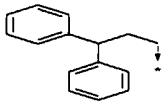
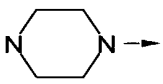
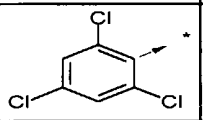
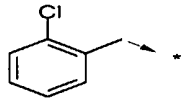
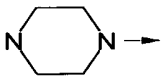
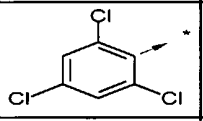
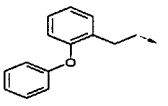
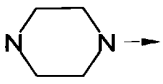
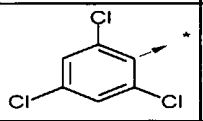
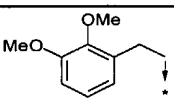
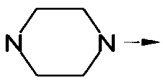
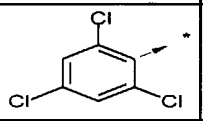
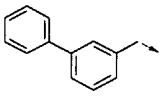
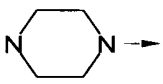
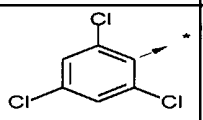
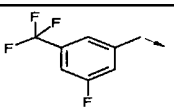
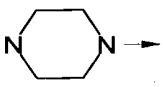
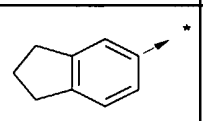
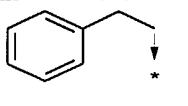
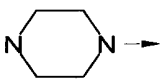
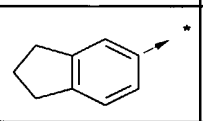
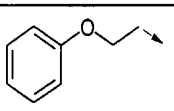
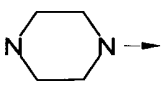
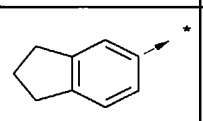
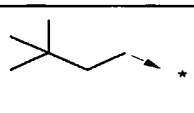
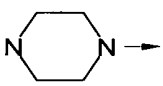
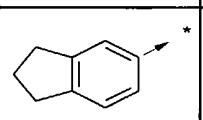
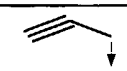
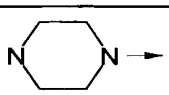
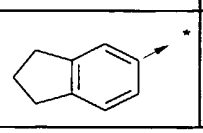
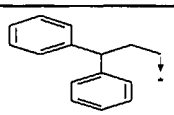


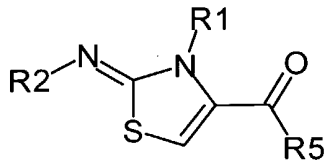
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2290				77,2	4,52	555,33
2291				69,3	3,98	523,35
2292				73,3	4,98	525,34
2293				73,1	5,44	535,29
2294				59,4	5,14	482,30
2295				76,0	5,09	498,28
2296				62,3	5,47	462,32
2297				58,6	4,55	416,22
2298				79,5	5,84	572,32
2299				74,9	5,3	502,25
2300				72,7	5,71	574,28
2301				71,1	5,06	542,32
2302				73,0	5,66	544,29

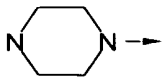
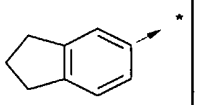
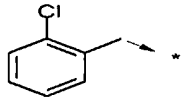
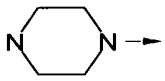
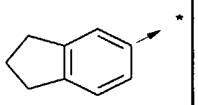
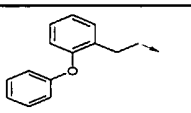
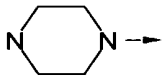
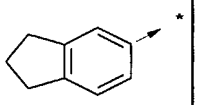
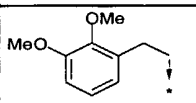
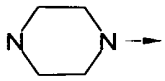
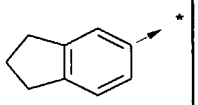
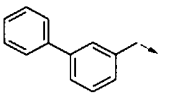
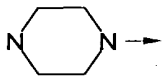
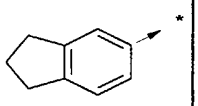
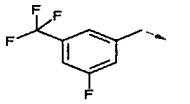
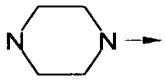
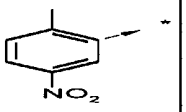
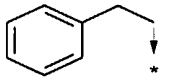
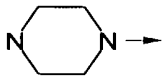
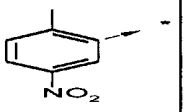
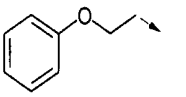
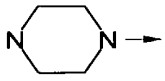
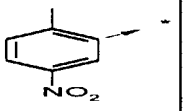
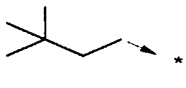
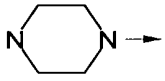
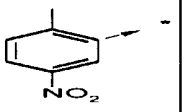
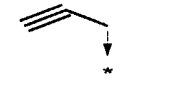
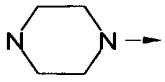
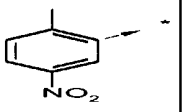
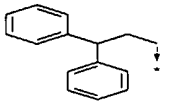
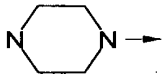
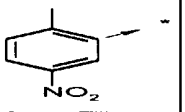
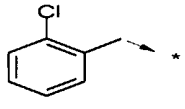
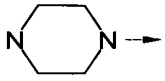
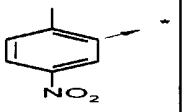
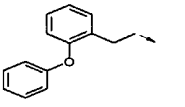
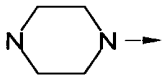
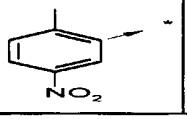
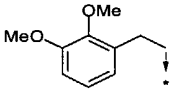


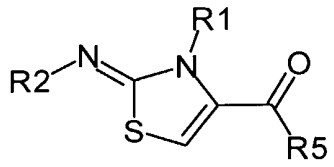
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2303				64,6	5,62	554,24
2304				92,2	4,62	435,30
2305				90,1	4,67	451,29
2306				84,3	4,76	415,32
2307				43,7	4,34	369,27
2308				83,7	5,44	525,34
2309				80,3	4,96	455,25
2310				83,7	5,26	527,32
2311				82,8	4,64	495,34
2312				94,1	5,44	497,32
2313				90,1	5,55	507,29
2314				64,7	5,62	495,16
2315				50,7	5,54	511,15

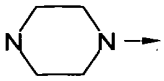
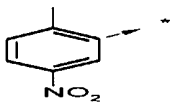
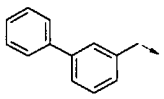
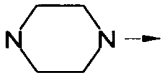
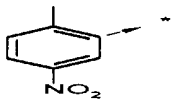
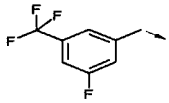


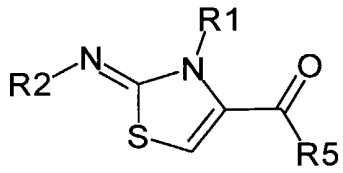
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
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2317				20,9	4,86	429,14
2318				79,2	6,27	585,15
2319				46,3	5,58	515,12
2320				84,1	6,23	587,20
2321				91,1	5,64	555,18
2322				67,8	6,07	557,22
2323				23,9	5,96	567,17
2324				68,1	4,02	433,40
2325				65,6	4,2	449,38
2326				83,5	4,14	413,39
2327				36,4	3,94	367,35
2328				87,5	4,82	523,39

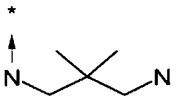
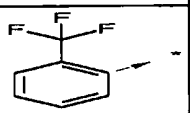
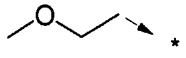
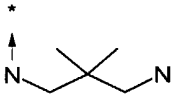
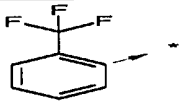
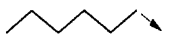
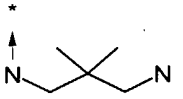
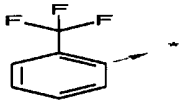
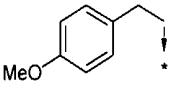
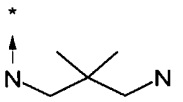
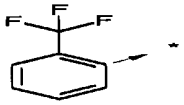
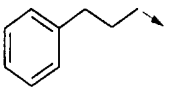
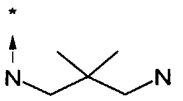
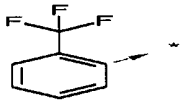
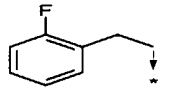
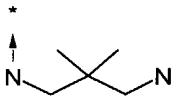
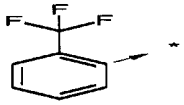
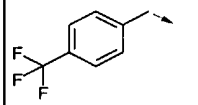
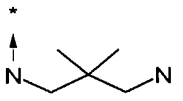
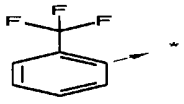
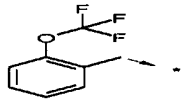
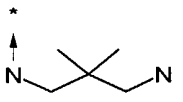
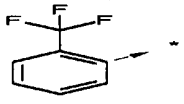
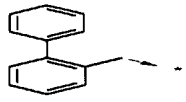
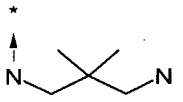
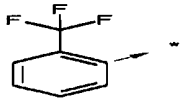
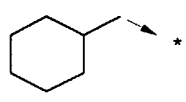
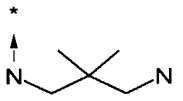
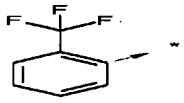
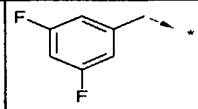
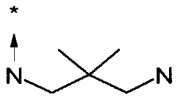
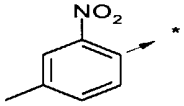
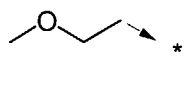
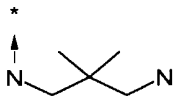
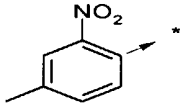
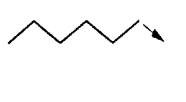
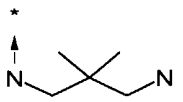
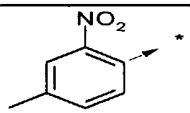
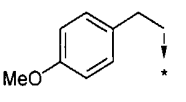


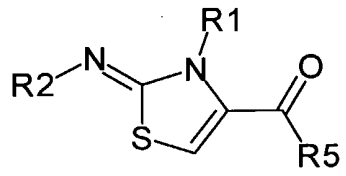
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2329				65,1	4,42	453,33
2330				91,7	4,59	525,37
2331				81,5	4,01	493,40
2332				73,9	4,96	495,39
2333				72,7	5,3	505,33
2334				79,9	4,93	452,35
2335				81,8	4,88	468,33
2336				85,9	5,17	432,36
2337				36,2	4,25	386,28
2338				93,3	5,62	542,36
2339				76,5	4,96	472,3
2340				84,9	5,53	544,34
2341				80,6	4,96	512,34

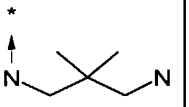
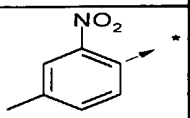
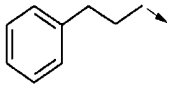
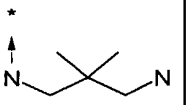
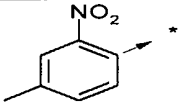
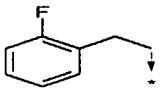
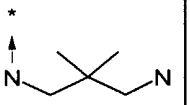
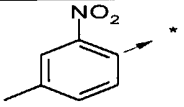
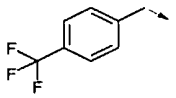
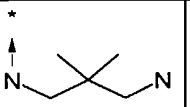
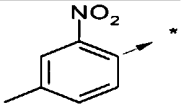
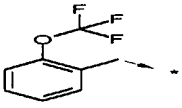
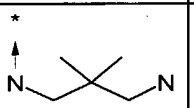
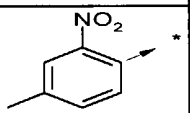
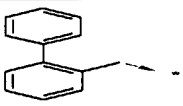
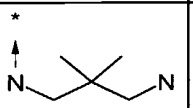
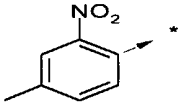
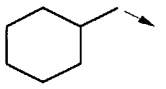
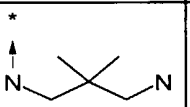
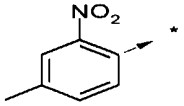
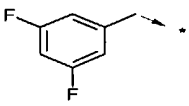
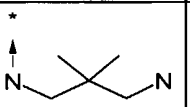
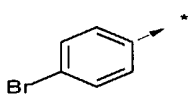
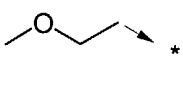
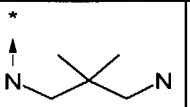
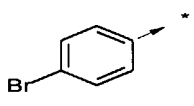
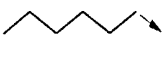
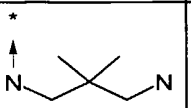
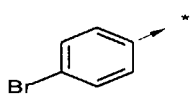
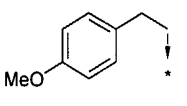
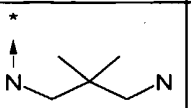
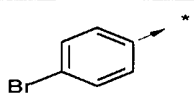
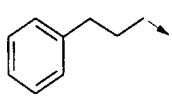
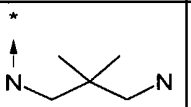
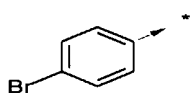
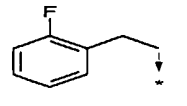
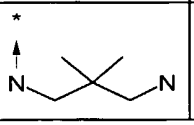
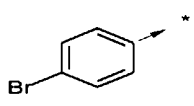
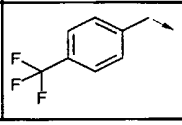


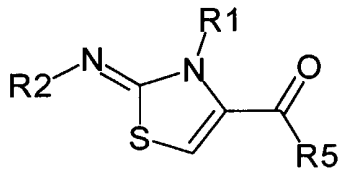
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2342				79,6	5,42	514,35
2343				64,9	5,34	524,27

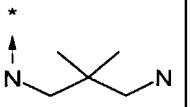
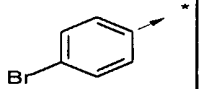
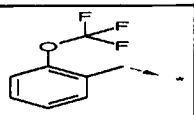
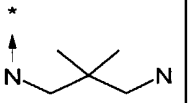
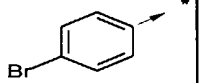
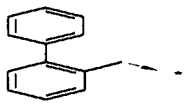
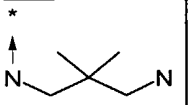
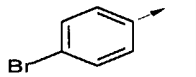
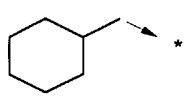
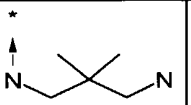
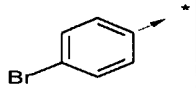
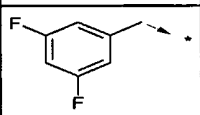
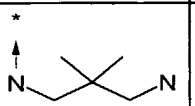
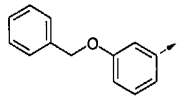
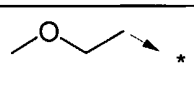
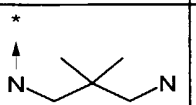
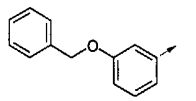
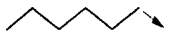
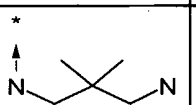
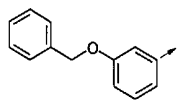
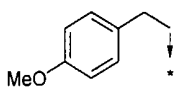
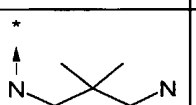
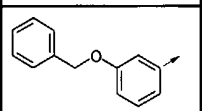
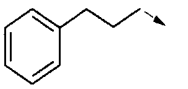
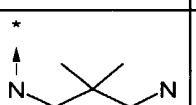
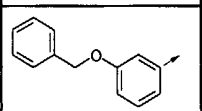
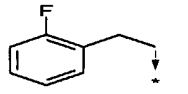
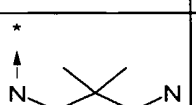
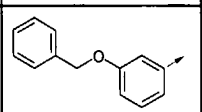
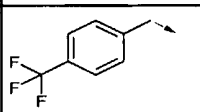
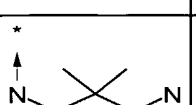
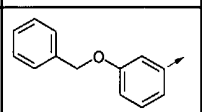
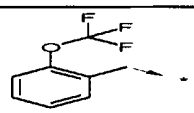
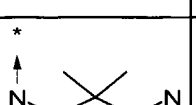
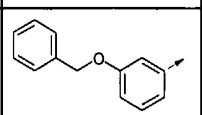
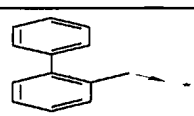
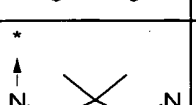
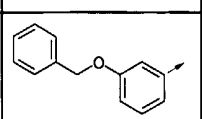
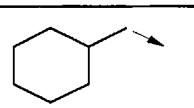


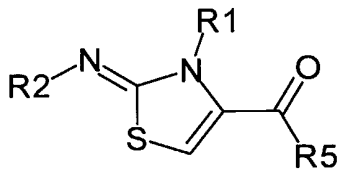
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2344				76,9	4,54	431,32
2345				80,7	5,47	457,38
2346				82,2	5,19	507,34
2347				82,1	5,38	491,35
2348				76,7	5,2	495,30
2349				83,1	5,42	531,30
2350				78,5	5,4	547,27
2351				86,8	5,58	539,33
2352				79,3	5,37	469,38
2353				83,1	5,18	499,31
2354				82,3	4,32	422,33
2355				78,2	5,26	448,39
2356				79,7	4,98	498,37

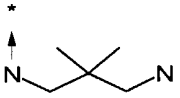
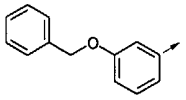
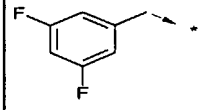
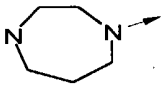
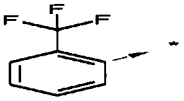
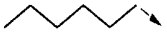
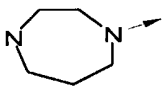
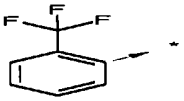
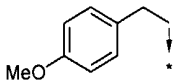
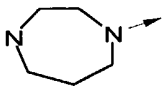
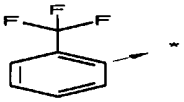
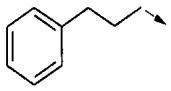
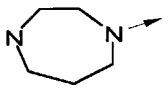
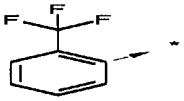
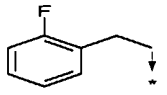
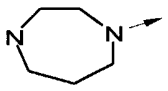
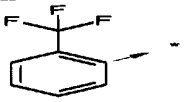
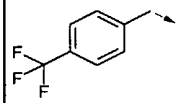
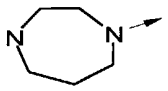
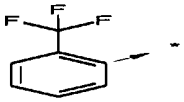
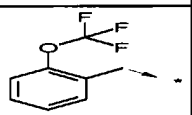
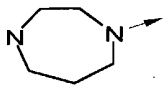
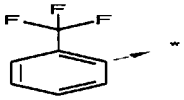
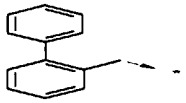
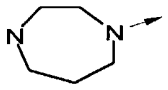
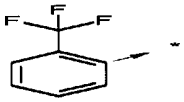
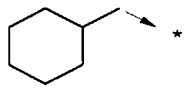
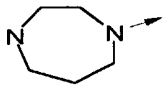
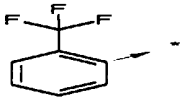
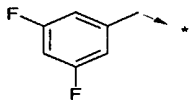
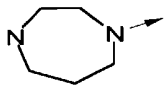
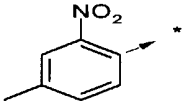
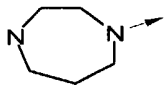
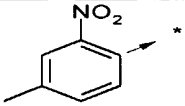
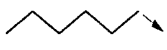
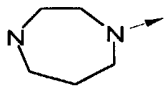
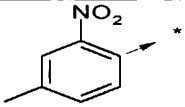
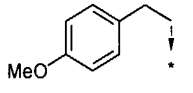


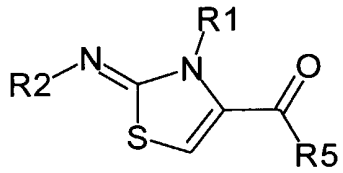
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2357				80,0	5,2	482,38
2358				75,3	5.0	486,34
2359				81,9	5,26	522,30
2360				77,7	5,25	538,29
2361				83,9	5,4	530,35
2362				81,8	5,16	460,38
2363				79,3	5,03	490,31
2364				82,5	4,01	441,22
2365				80,6	4,98	467,28
2366				82,7	4,72	517,25
2367				83,6	5.0	501,26
2368				84,3	4,9	505,23
2369				82,5	5,48	541,19

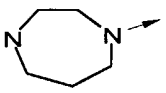
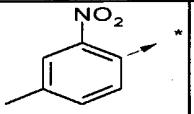
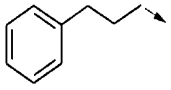
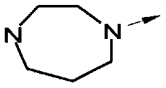
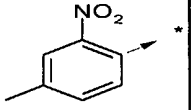
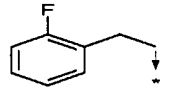
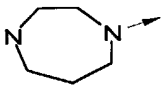
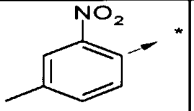
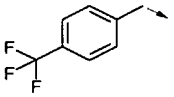
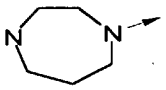
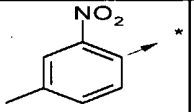
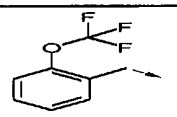
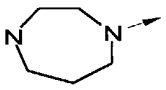
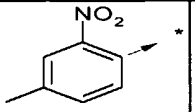
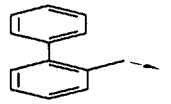
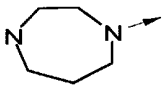
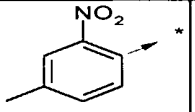
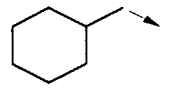
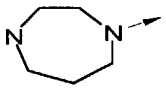
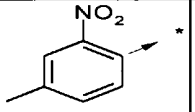
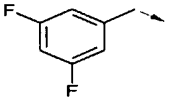
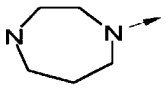
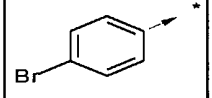
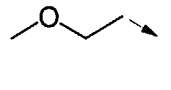
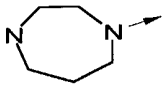
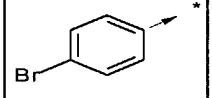
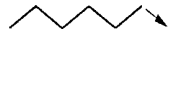
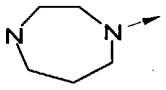
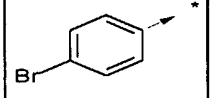
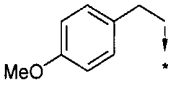
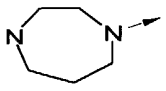
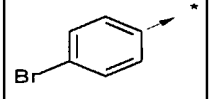
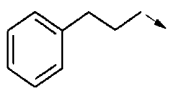
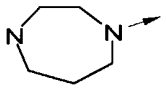
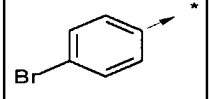
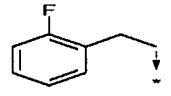
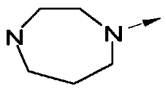
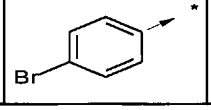
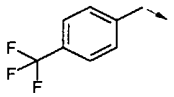


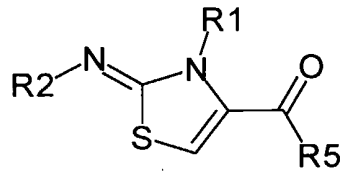
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2370				86,6	5,5	557,19
2371				85,4	5,53	549,24
2372				82,3	4,9	479,30
2373				81,5	5,26	509,21
2374				83,4	4,23	469,37
2375				82,3	4,94	495,40
2376				88,1	4,73	545,36
2377				90,4	4,99	529,39
2378				90,6	4,92	533,35
2379				85,2	5,62	569,33
2380				84,2	5,6	585,33
2381				85,0	5,54	577,38
2382				80,6	4,87	507,41

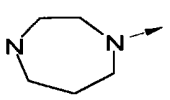
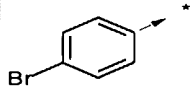
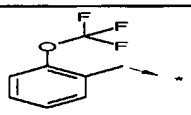
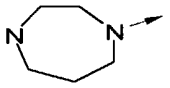
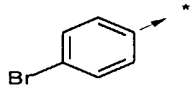
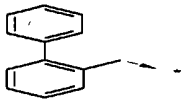
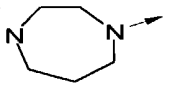
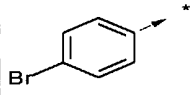
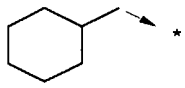
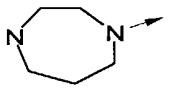
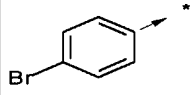
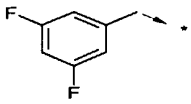
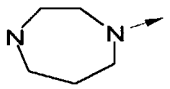
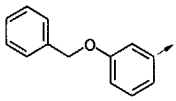
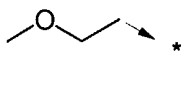
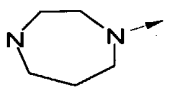
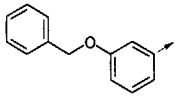
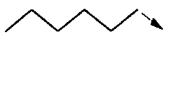
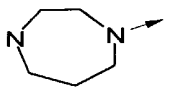
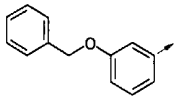
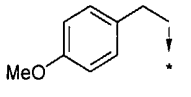
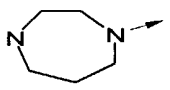
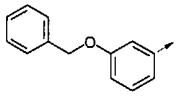
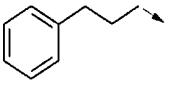
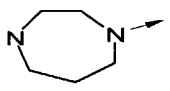
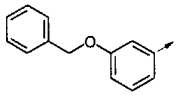
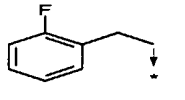
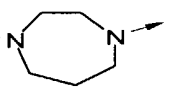
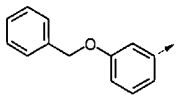
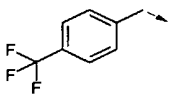
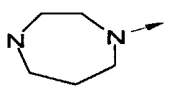
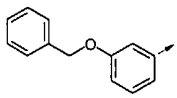
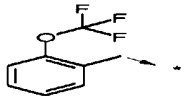
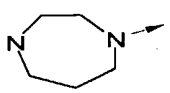
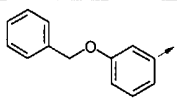
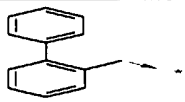
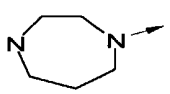
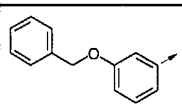
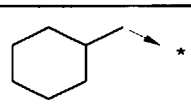


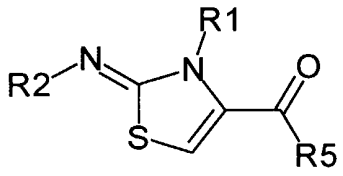
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2383				85,9	5,42	537,34
2384				74,2	5,32	455,34
2385				92,3	5,1	505,32
2386				78,4	5,23	489,33
2387				71,3	5,12	493,32
2388				74,4	5,32	529,27
2389				68,8	5,29	545,25
2390				77,7	5,44	537,33
2391				80,7	5,24	467,36
2392				63,3	5,04	497,30
2393				87,4	4,16	420,33
2394				82,7	5,12	446,38
2395				82,4	4,88	496,35

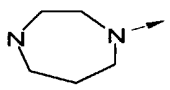
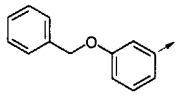
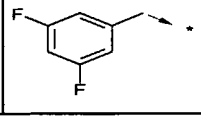


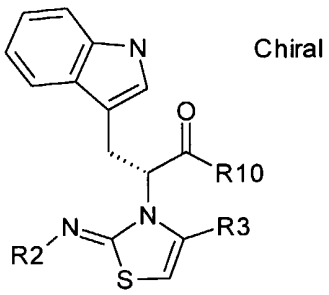
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2396				78,0	5,04	480,37
2397				75,9	4,9	484,33
2398				71,5	5,16	520,29
2399				65,4	5,12	536,30
2400				76,0	5,28	528,33
2401				93,8	5,03	458,38
2402				69,2	4,88	488,30
2403				68,3	3,88	439,23
2404				70,8	4,89	465,28
2405				76,2	4,72	515,23
2406				76,5	4,88	499,27
2407				90,1	4,88	503,26
2408				78,8	5,36	539,19

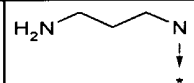
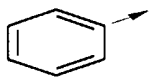
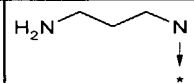
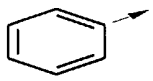
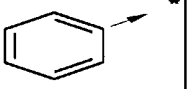
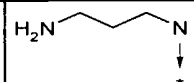
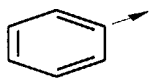
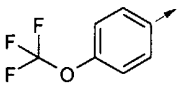
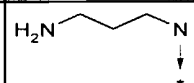
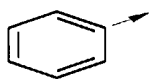
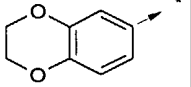
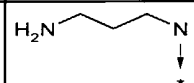
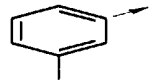
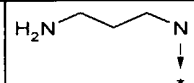
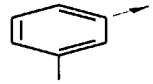
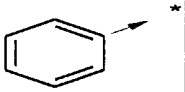
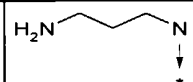
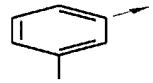
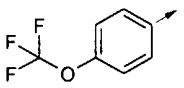
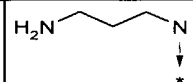
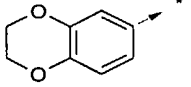
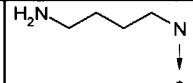
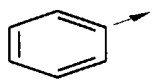
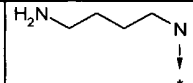
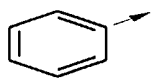
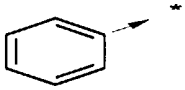
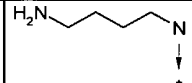
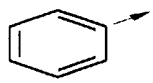
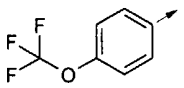
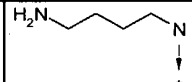
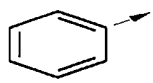
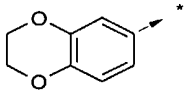


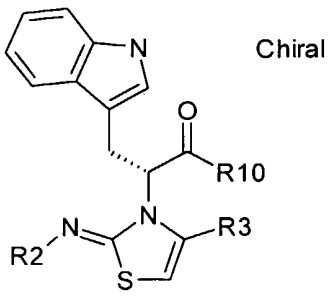
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2409				76,1	5,31	555,17
2410				80,5	5,29	547,22
2411				68,2	4,86	477,30
2412				55,7	5,1	507,20
2413				69,2	4,12	467,36
2414				73,6	4,85	493,41
2415				73,9	4,72	543,36
2416				73,4	4,87	527,39
2417				90,6	4,92	531,36
2418				71,6	5,5	567,32
2419				60,5	5,4	583,32
2420				60,8	5,29	575,36
2421				58,8	4,82	505,39

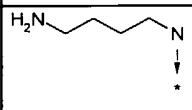
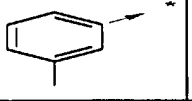
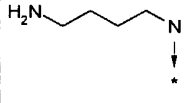
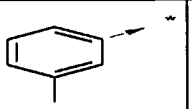
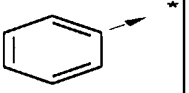
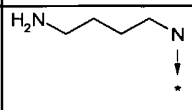
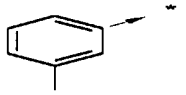
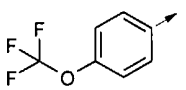
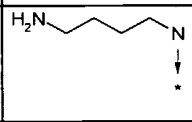
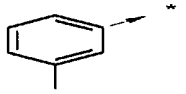
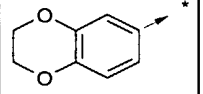
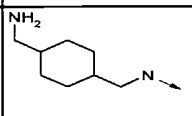
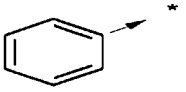
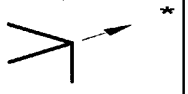
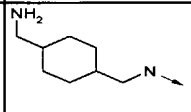
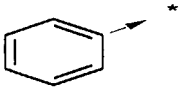
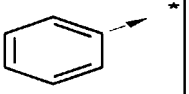
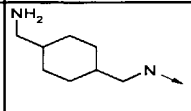
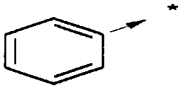
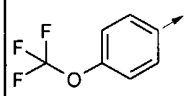
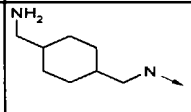
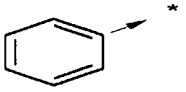
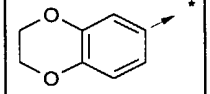
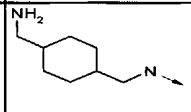
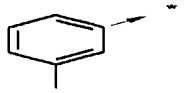
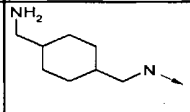
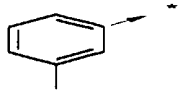
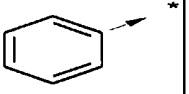
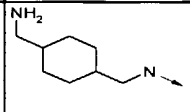
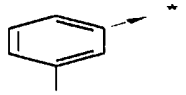
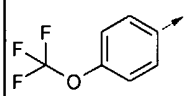
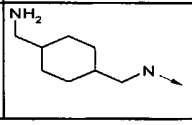
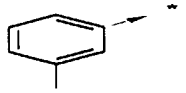
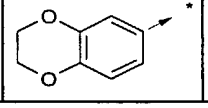


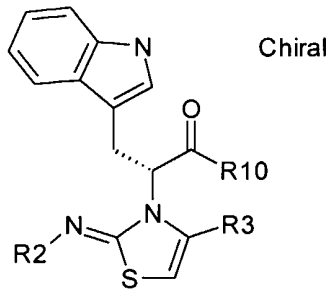
Ex.	R5	R2	R1	Pureté (%)	tr (min.)	$[M+H]^+$
2422				54,7	5,29	535,31

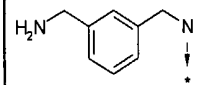
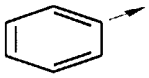
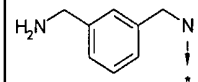
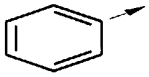
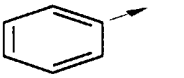
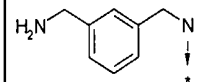
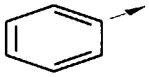
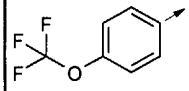
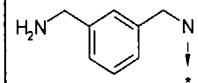
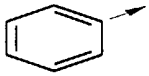
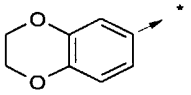
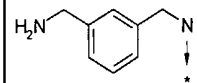
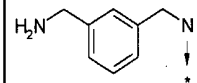
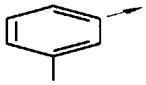
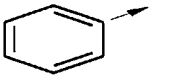
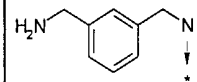
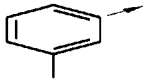
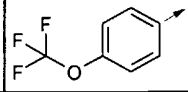
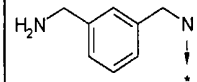
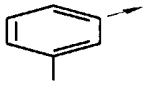
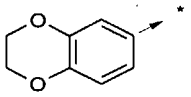
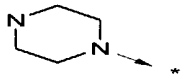
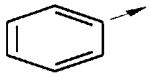
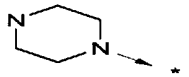
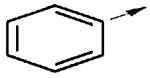
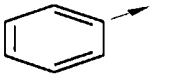
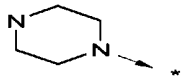
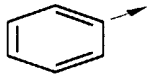
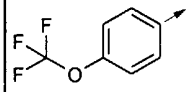
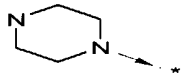
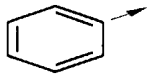
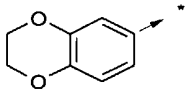


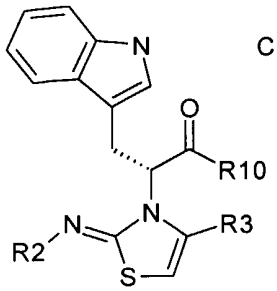
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	[M+H]+
2423				79,8	3,66	476,30
2424				59,3	3,68	496,26
2425				60,5	4,2	580,22
2426				52,7	3,68	554,24
2427				72,3	3,87	490,30
2428				63,8	3,85	510,26
2429				63,0	4,34	594,23
2430				54,1	3,82	568,25
2431				76,9	3,72	490,30
2432				70,7	3,73	510,26
2433				69,1	4,23	594,24
2434				52,7	3,72	568,24

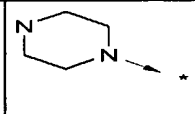
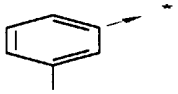
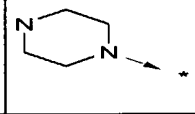
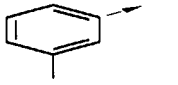
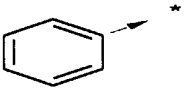
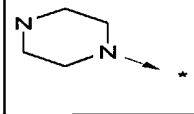
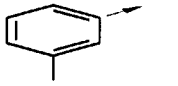
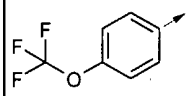
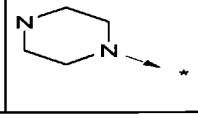
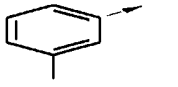
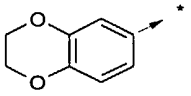


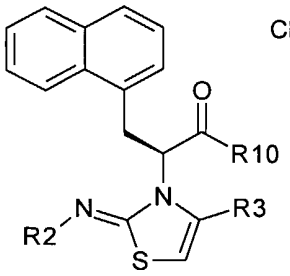
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	[M+H]+
2435				76,6	3,92	504,32
2436				64,8	3,9	524,28
2437				66,2	4,37	608,24
2438				59,3	3,86	582,27
2439				74,3	3,9	544,32
2440				65,4	3,91	564,29
2441				63,8	4,41	648,30
2442				57,6	3,92	622,31
2443				77,8	4,09	558,34
2444				65,5	4,08	578,30
2445				64,3	4,5	662,31
2446				47,6	4,04	636,36

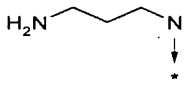
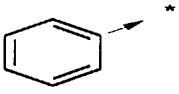
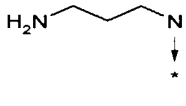
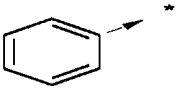
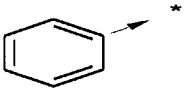
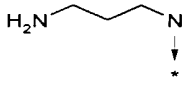
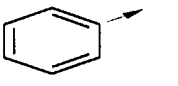
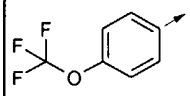
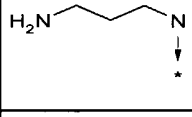
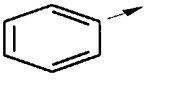
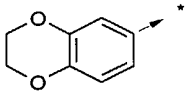
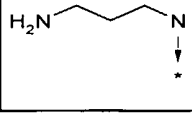
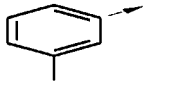


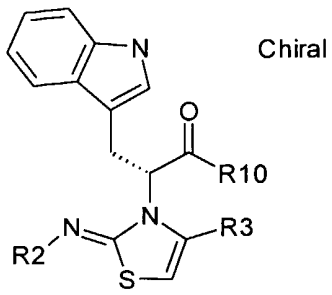
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	[M+H]+
2447				78,6	3,88	538,28
2448				61,2	3,9	558,24
2449				59,8	4,38	642,27
2450				48,4	3,88	616,30
2451				79,9	4,06	552,28
2452				59,4	4,04	572,25
2453				61,4	4,52	656,29
2454				50,0	4,02	630,31
2455				76,1	3,74	488,29
2456				88,3	3,72	508,25
2457				84,2	4,21	592,22
2458				82,1	3,71	566,24

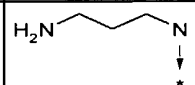
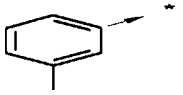
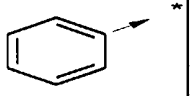
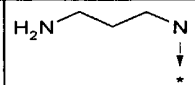
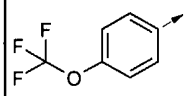
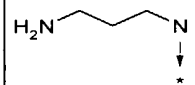
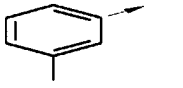
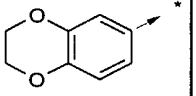
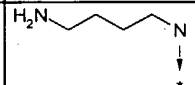
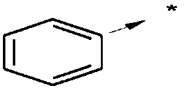
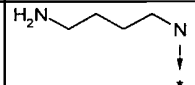
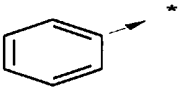
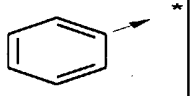
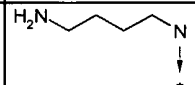
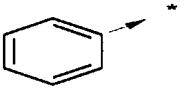
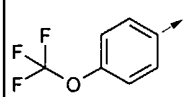
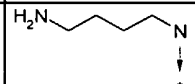
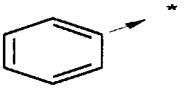
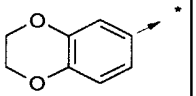
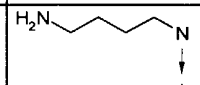
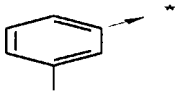
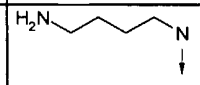
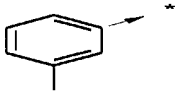
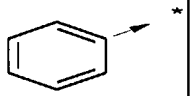
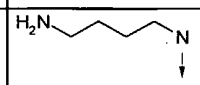
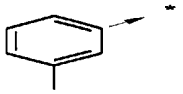
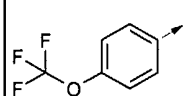
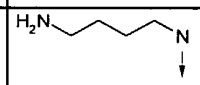
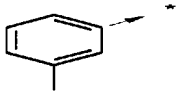
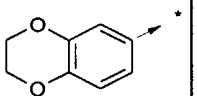
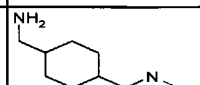
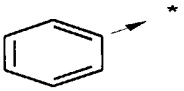


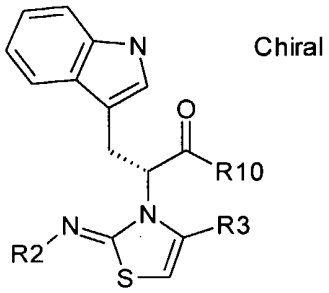
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	[M+H]+
2459				72,4	3,96	502,32
2460				88,5	3,89	522,27
2461				86,6	4,37	606,26
2462				77,2	3,8	580,26

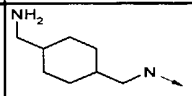
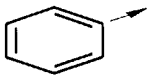
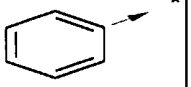
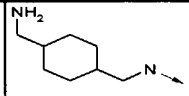
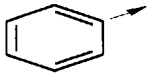
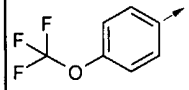
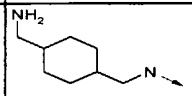
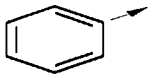
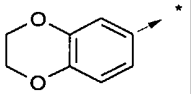
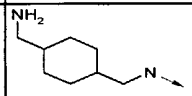
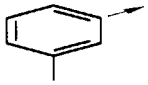
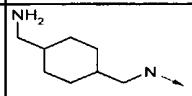
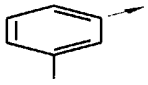
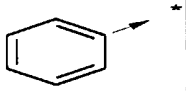
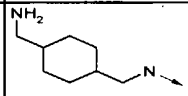
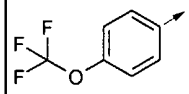
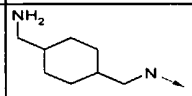
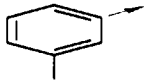
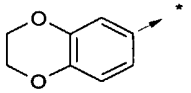
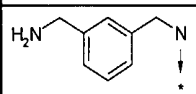
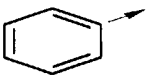
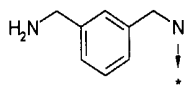
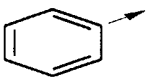
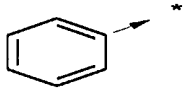
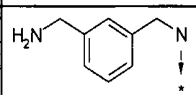
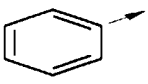
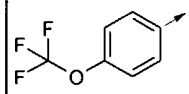
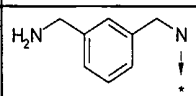
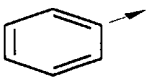
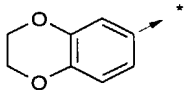
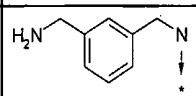
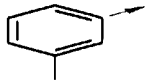


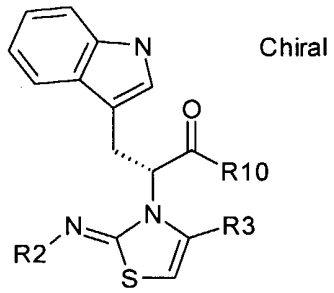
Ex.	R10	R2	R3	Pureté	tr (min.)	[M+H]+
2463				86,6	3,96	487,31
2464				58,7	4	507,27
2465				64,9	4,48	591,22
2466				40,3	4	565,25
2467				91,3	4,12	501,31

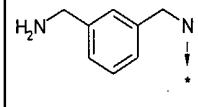
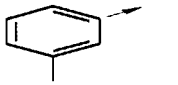
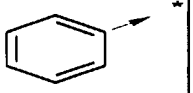
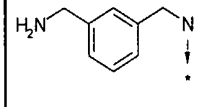
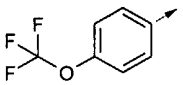
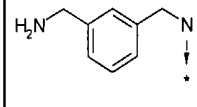
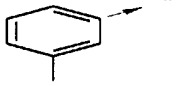
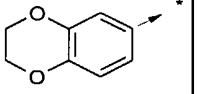
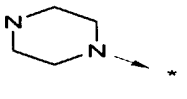
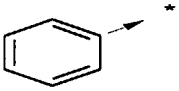
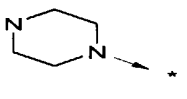
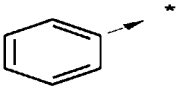
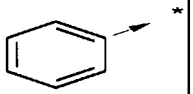
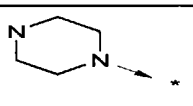
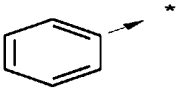
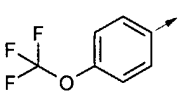
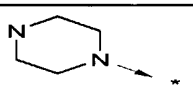
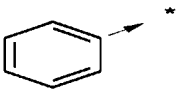
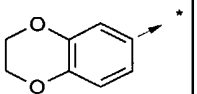
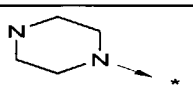
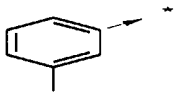
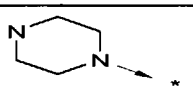
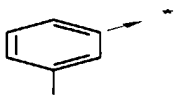
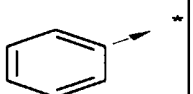
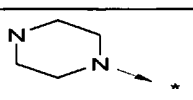
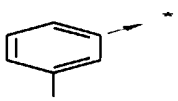
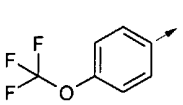
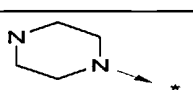
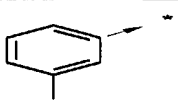
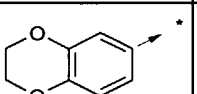


Ex.	R10	R2	R3	Pureté (%)	tr (min.)	[M+H]+
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2469				62,4	4,62	605,25
2470				33,1	4,13	579,27
2471				87,3	4,01	501,31
2472				54,0	4,05	521,25
2473				69,1	4,51	605,26
2474				35,4	4,04	579,27
2475				88,4	4,18	515,31
2476				68,0	4,19	535,28
2477				72,9	4,64	619,25
2478				32,6	4,17	593,28
2479				92,7	4,18	555,33

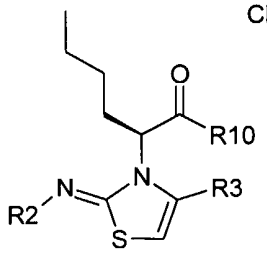


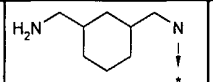
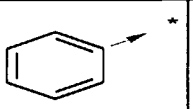
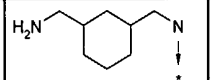
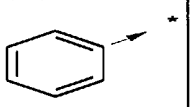
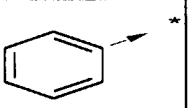
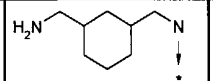
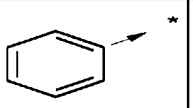
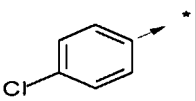
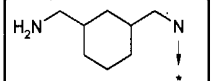
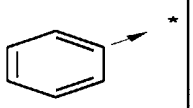
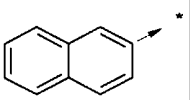
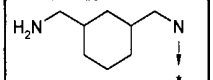
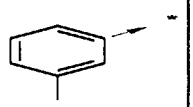
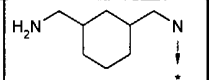
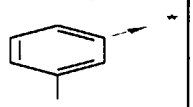
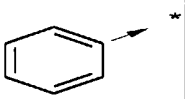
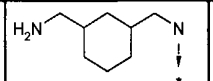
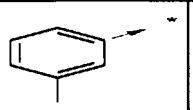
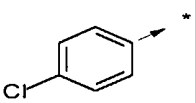
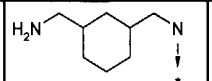
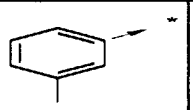
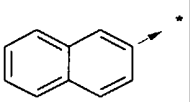
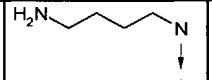
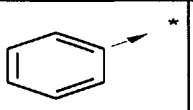
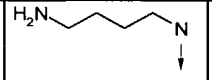
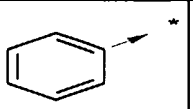
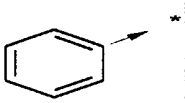
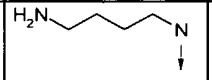
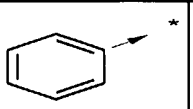
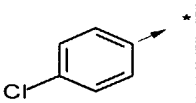
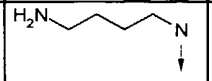
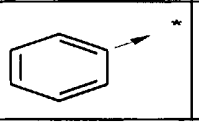
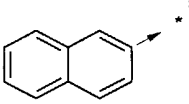
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	[M+H]+
2480				59,4	4,24	575,29
2481				71,8	4,72	659,33
2482				36,4	4,2	633,44
2483				92,4	4,36	569,34
2484				62,9	4,38	589,32
2485				71,9	4,82	673,33
2486				32,2	4,36	647,19
2487				90,2	4,14	549,28
2488				59,7	4,22	569,24
2489				66,6	4,7	653,25
2490				34,5	4,22	627,27
2491				91,3	4,32	563,30



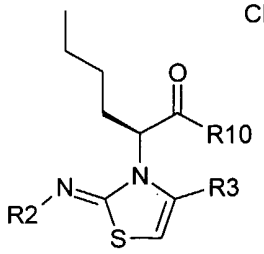
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	[M+H]+
2492				60,8	4,35	583,26
2493				73,3	4,8	667,27
2494				32,9	4,34	641,29
2495				60,4	3,94	499,30
2496				87,0	3,92	519,24
2497				84,4	4,41	603,24
2498				81,4	3,94	577,26
2499				73,9	4,12	513,31
2500				91,5	4,09	533,26
2501				89,6	4,54	617,26
2502				85,4	4,09	591,27

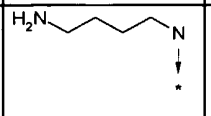
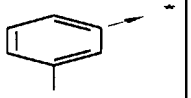
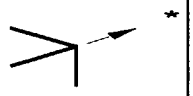
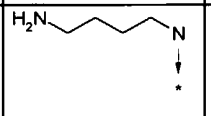
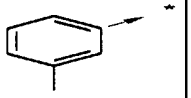
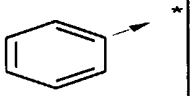
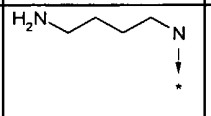
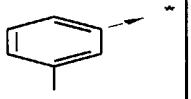
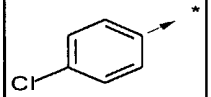
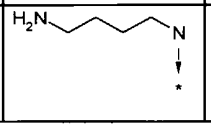
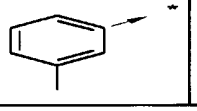
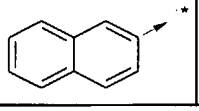
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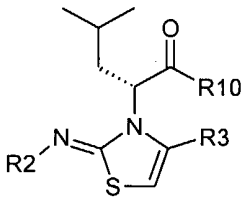
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	[M+H]+
2503				77,7	3,8	471,39
2504				37,7	3,82	491,34
2505				79,7	4,09	525,28
2506				58,5	4,23	541,33
2507				84,6	4.0	485,38
2508				73,2	4.0	505,34
2509				82,3	4,25	539,29
2510				74,2	4,37	555,34
2511				57,5	3,56	417,32
2512				66,9	3,56	437,27
2513				69,0	3,85	471,26
2514				71,1	4.0	487,33

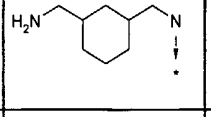
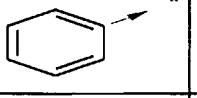
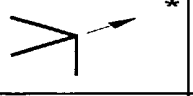
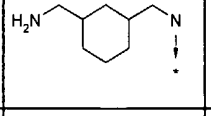
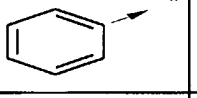
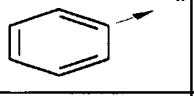
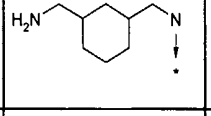
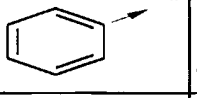
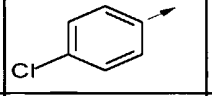
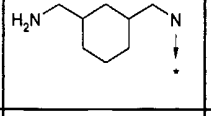
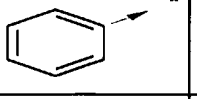
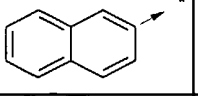
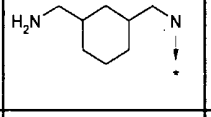
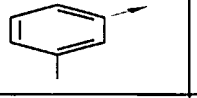
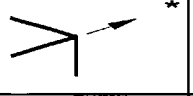
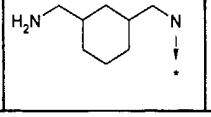
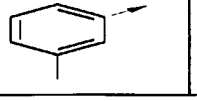
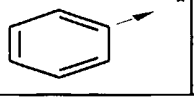
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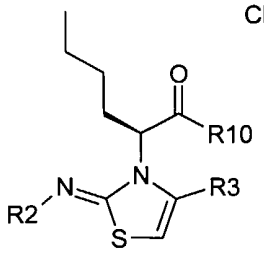
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	[M+H]+
2515				76,4	3,76	431,34
2516				67,8	3,75	451,30
2517				75,2	4,02	485,27
2518				70,4	4,16	501,32

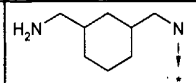
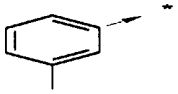
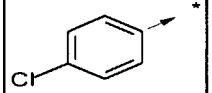
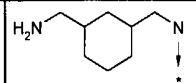
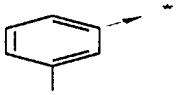
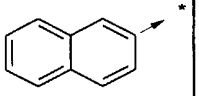
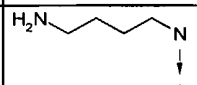
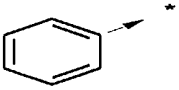
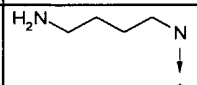
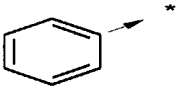
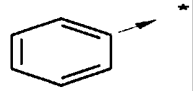
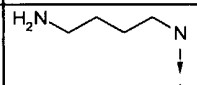
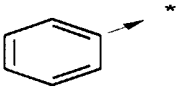
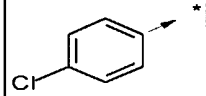
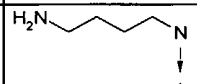
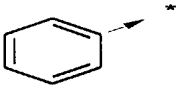
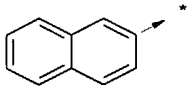
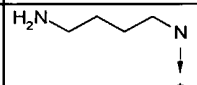
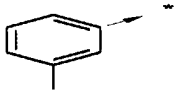
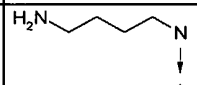
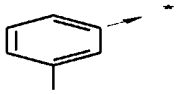
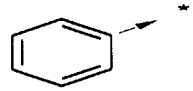
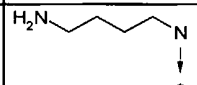
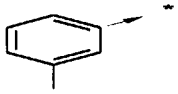
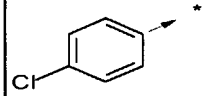
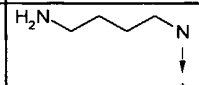
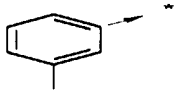
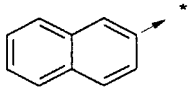
Chiral



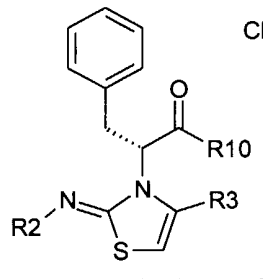
Ex.	R10	R2	R3	Pureté	tr (min.)	[M+H]+
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2520				67,9	3,76	491,33
2521				75,0	4,04	525,28
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Chiral

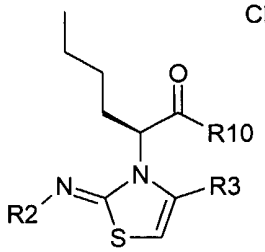


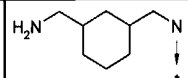
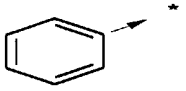
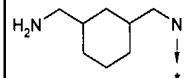
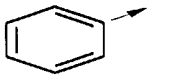
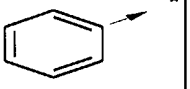
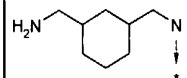
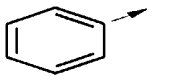
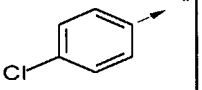
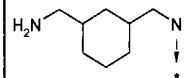
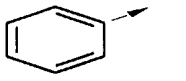
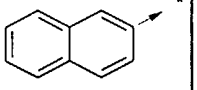
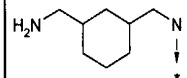
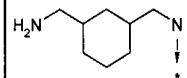
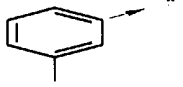
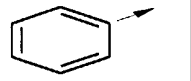
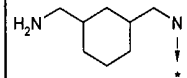
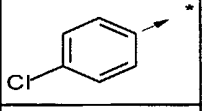
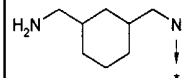
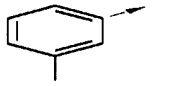
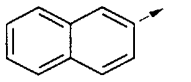
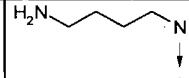
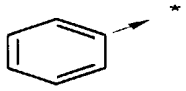
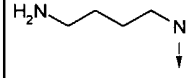
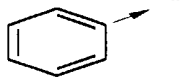
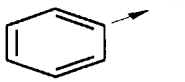
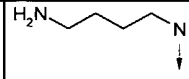
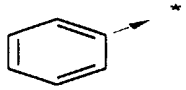
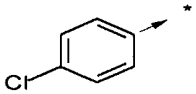
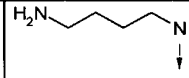
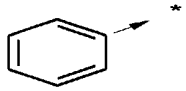
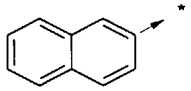
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	[M+H]+
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2526				80,9	4,33	555,34
2527				70,7	3,51	417,32
2528				50,3	3,52	437,28
2529				72,4	3,8	471,26
2530				74,5	3,96	487,32
2531				84,4	3,72	431,32
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2533				89,6	3,98	485,26
2534				77,9	4,12	501,32

Chiral

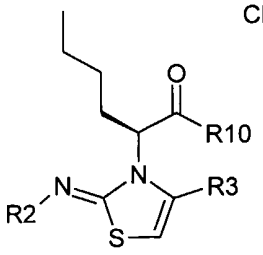


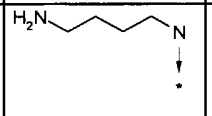
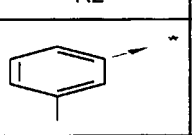
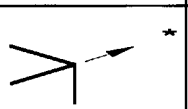
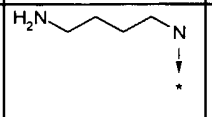
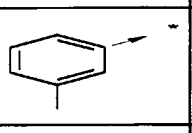
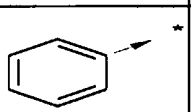
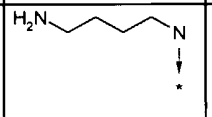
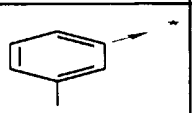
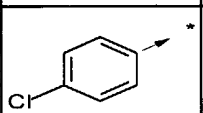
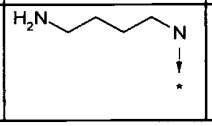
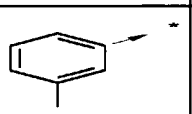
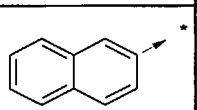
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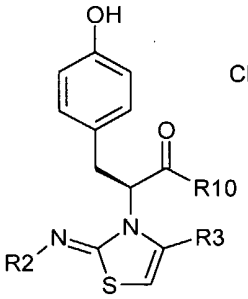


Ex.	R10	R2	R3	Pureté (%)	tr (min.)	[M+H]+
Ex.	R10	R2	R3	Pureté	tr (min.)	[M+H]+
2535				84,7	3,83	505,34
2536				75,2	3,89	525,30
2537				75,9	4,17	559,25
2538				70,4	4,29	575,30
2539				90,9	4,03	519,35
2540				71,5	4,04	539,31
2541				79,2	4,31	573,25
2542				80,6	4,43	589,33
2543				77,2	3,62	451,30
2544				69,9	3,65	471,27
2545				74,8	3,92	505,22
2546				66,7	4,06	521,26

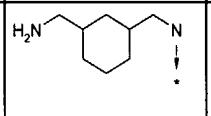
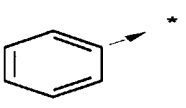
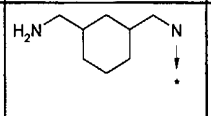
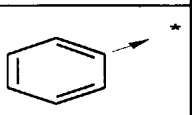
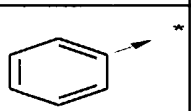
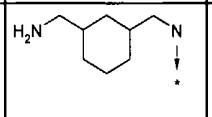
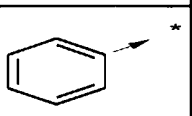
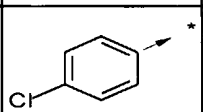
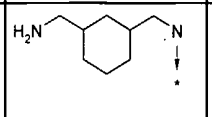
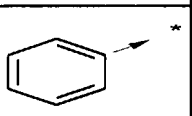
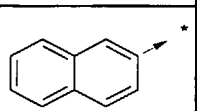
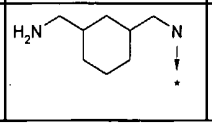
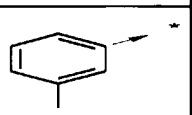
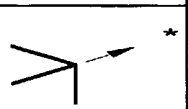
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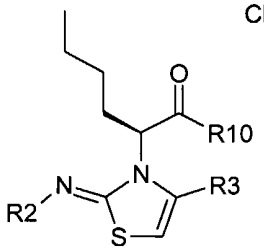
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	[M+H]+
2547				83,5	3,82	465,31
2548				72,9	3,82	485,28
2549				33,1	4,1	519,23
2550				51,2	4,22	535,28

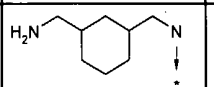
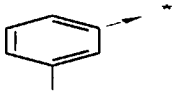
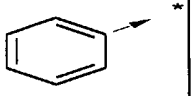
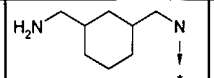
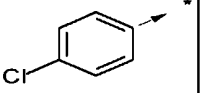
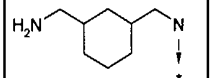
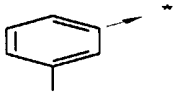
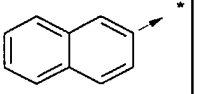
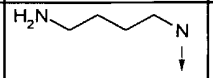
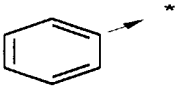
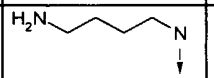
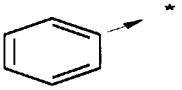
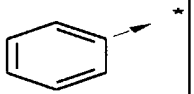
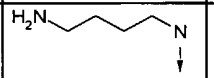
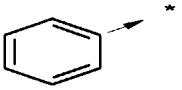
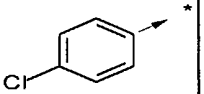
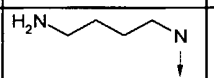
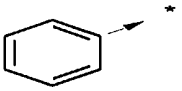
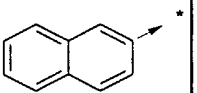
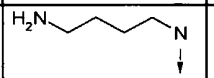
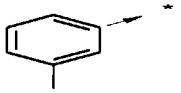
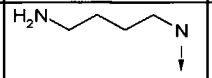
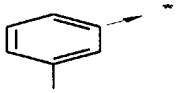
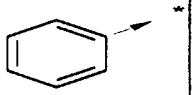
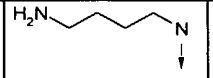
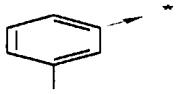
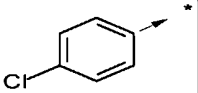
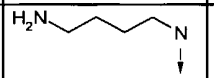
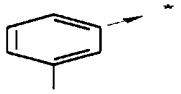
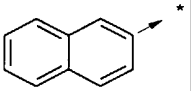


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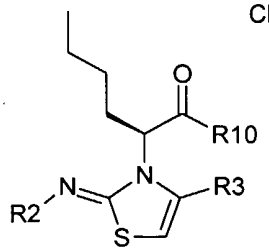
Ex.	R10	R2	R3	Pureté	tr (min.)	[M+H]+
2551				79,8	3,45	521,33
2552				72,6	4,14	541,29
2553				63,7	3,79	575,24
2554				73,8	3,93	591,31
2555				91,2	3,65	535,35

Chiral



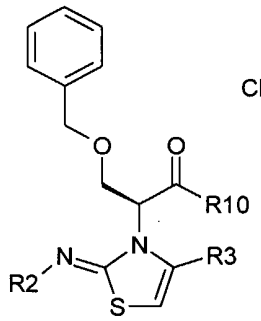
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	[M+H]+
2556				75,6	3,66	555,29
2557				78,3	3,94	589,26
2558				69,7	4,06	605,35
2559				69,1	3,22	467,29
2560				73,7	3,26	487,27
2561				79,6	3,56	521,20
2562				73,5	3,72	537,27
2563				86,1	3,42	481,31
2564				77,1	3,43	501,29
2565				83,0	3,73	535,22
2566				71,9	3,86	551,28

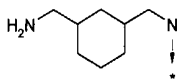
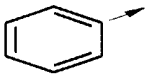
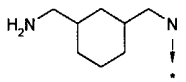
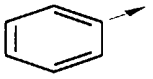
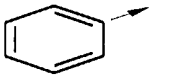
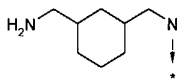
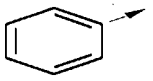
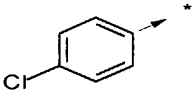
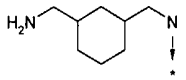
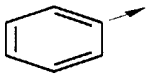
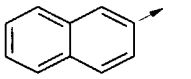
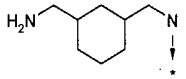
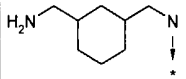
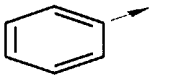
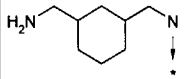
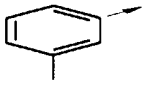
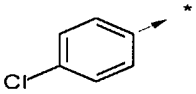
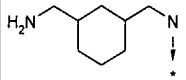
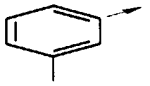
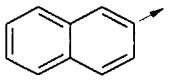
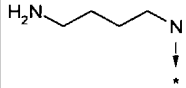
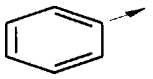
Chiral



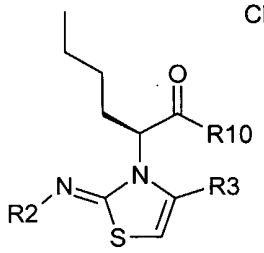
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	[M+H]+

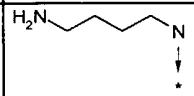
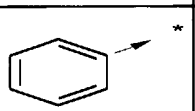
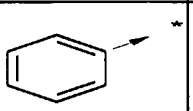
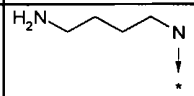
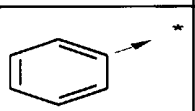
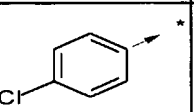
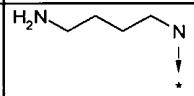
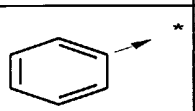
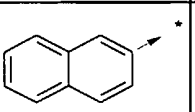
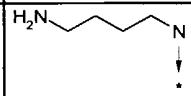
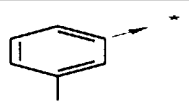
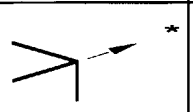
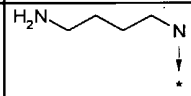
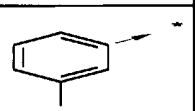
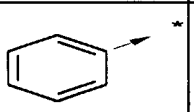
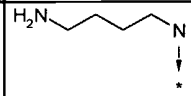
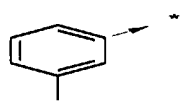
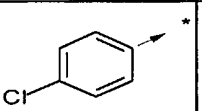
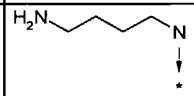
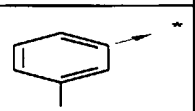
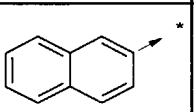
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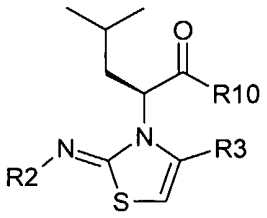
Ex.	R10	R2	R3	Pureté	tr (min.)	[M+H]+
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2568				40,6	4,04	555,31
2569				47,5	4,31	589,26
2570				37,4	4,43	605,33
2571				79,3	4,18	549,35
2572				38,8	4,19	569,30
2573				51,6	4,46	603,28
2574				36	4,55	619,35
2575				61,4	3,77	481,30

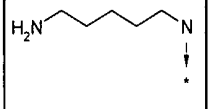
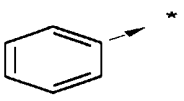
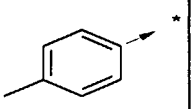
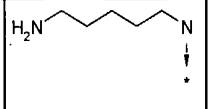
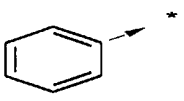
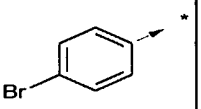
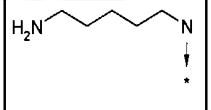
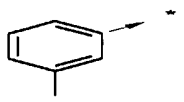
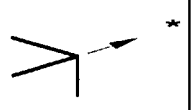
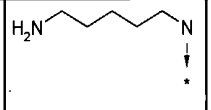
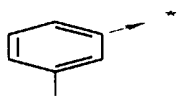
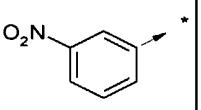
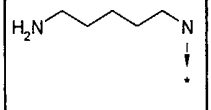
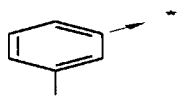
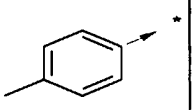
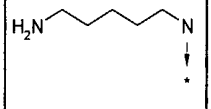
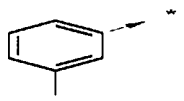
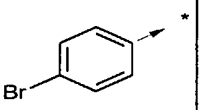
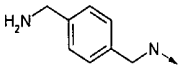
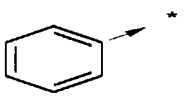
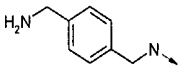
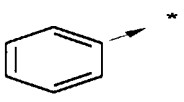
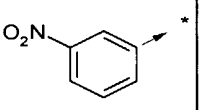
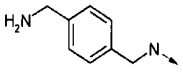
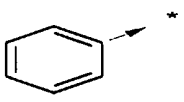
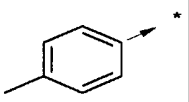
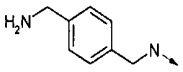
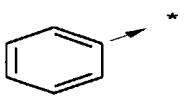
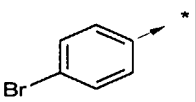
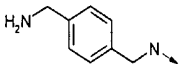
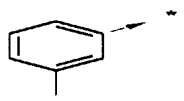
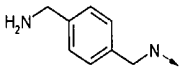
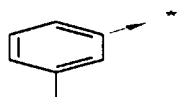
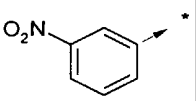
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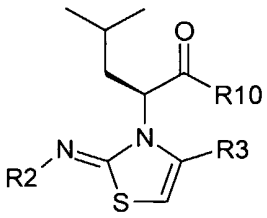
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	[M+H]+
2576				37,9	3,81	501,28
2577				45,6	4,08	535,21
2578				34,9	4,2	551,27
2579				66,2	3,95	495,31
2580				44,8	3,96	515,25
2581				54,4	4,23	549,24
2582				36,5	4,34	565,28

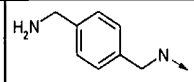
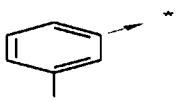
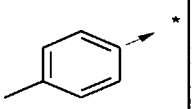
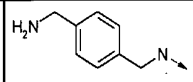
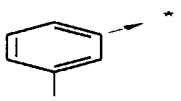
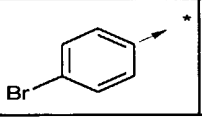
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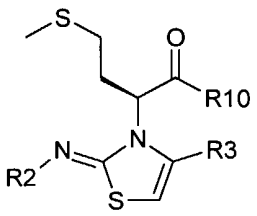
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
2583				52,2	3,91	465,24
2584				55,9	4	529,14
2585				51,3	3,9	445,29
2586				57,4	3,9	510,24
2587				54,3	4,04	479,28
2588				61,7	4,12	543,15
2589				80,0	3,82	465,25
2590				61,6	3,85	530,20
2591				61,1	3,97	499,25
2592				61,3	4,06	563,1
2593				84,2	3,96	479,29
2594				58,8	3,98	544,20

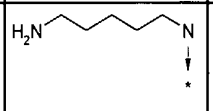
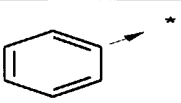
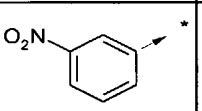
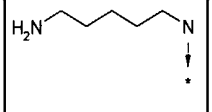
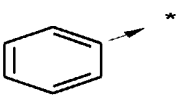
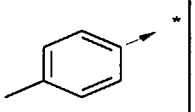
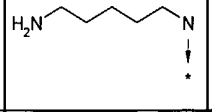
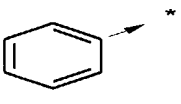
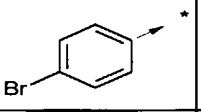
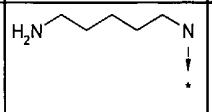
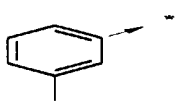
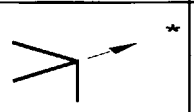
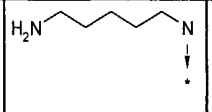
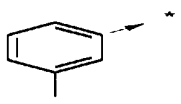
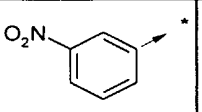
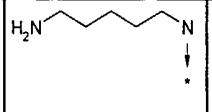
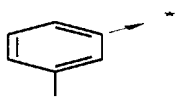
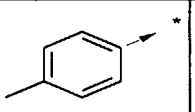
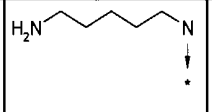
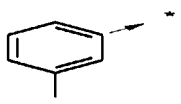
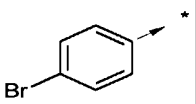
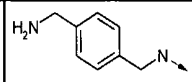
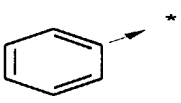
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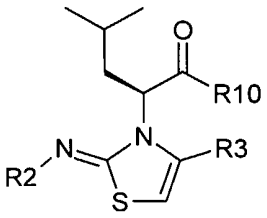
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
2595				61,5	4,1	513,26
2596				65,5	4,19	577,1

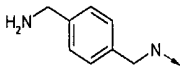
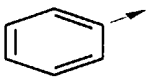
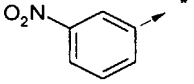
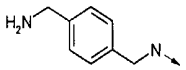
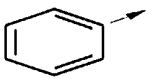
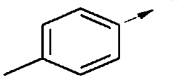
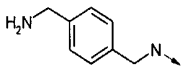
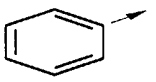
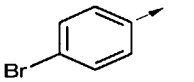
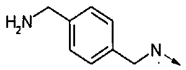
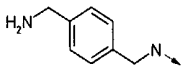
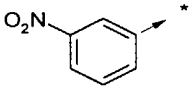
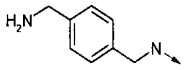
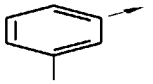
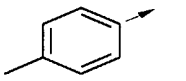
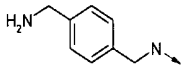
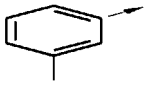
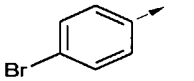
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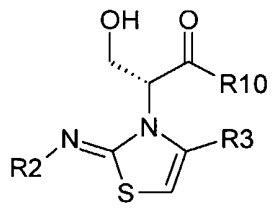
Ex.	R10	R2	R3	Pureté	tr (min.)	$[M+H]^+$
2597				28,6	3,7	514,16
2598				39,0	3,83	483,24
2599				39,9	3,92	547,1
2600				53,5	3,8	463,26
2601				28,8	3,83	528,19
2602				31,0	3,96	497,24
2603				34,0	4,05	561,1
2604				64,5	3,72	483,24

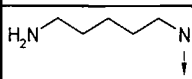
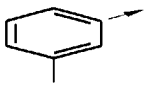
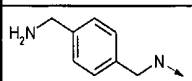
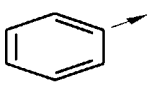
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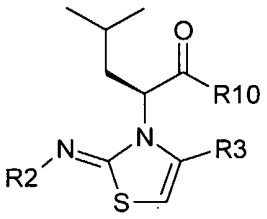
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
2605				25,4	3,78	548,12
2606				36,8	3,9	517,20
2607				31,2	4	581,1
2608				72,8	3,86	497,24
2609				31,7	3,9	562,17
2610				40,1	4,02	531,21
2611				38,2	4,12	595,1

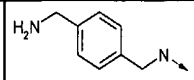
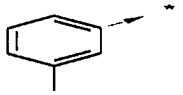
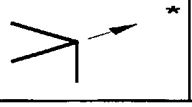
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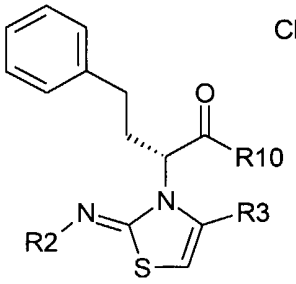
Ex.	R10	R2	R3	Pureté	tr (min.)	$[M+H]^+$
2612				45,2	3,49	419,24
2613				56,6	3,39	439,21

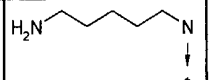
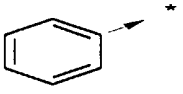
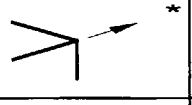
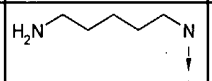
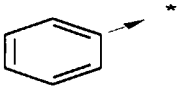
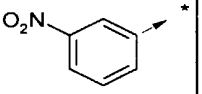
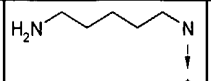
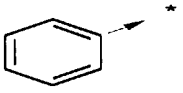
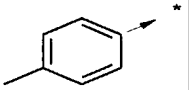
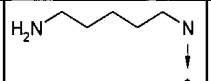
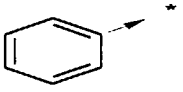
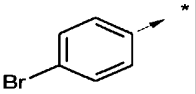
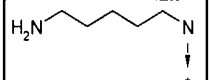
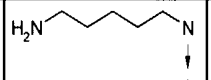
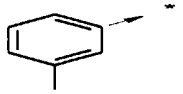
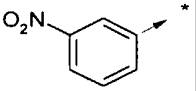
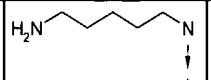
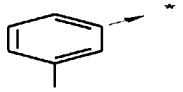
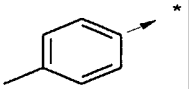
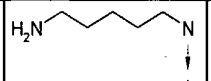
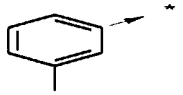
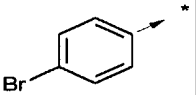
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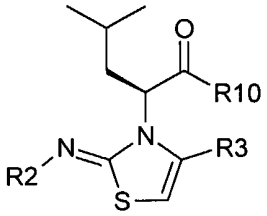
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
2614				58,6	3,56	453,23

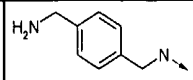
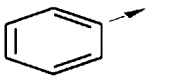
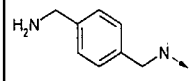
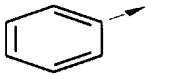
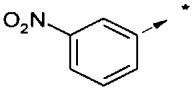
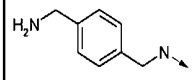
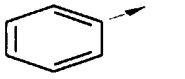
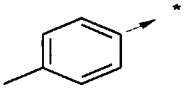
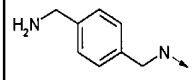
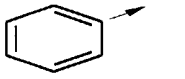
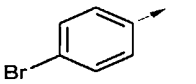
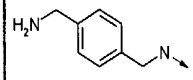
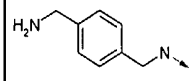
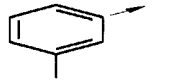
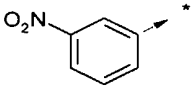
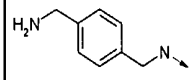
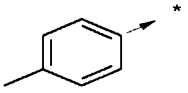
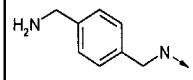
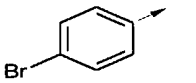
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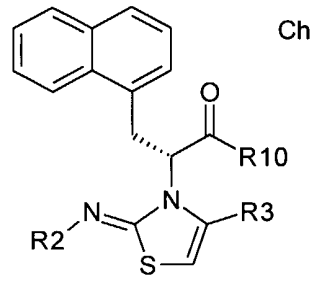
Ex.	R10	R2	R3	Pureté	tr (min.)	$[M+H]^+$
2615				65,5	3,96	479,28
2616				50,5	4	544,19
2617				55,7	4,11	513,26
2618				55,5	4,2	577,13
2619				67,1	4,09	493,30
2620				53,7	4,11	558,20
2621				55,5	4,22	527,27
2622				72,1	4,3	591,13

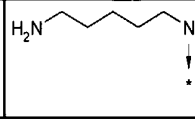
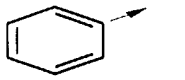
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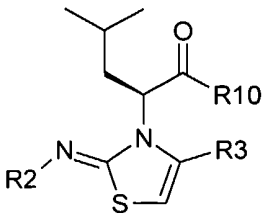
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
2623				81,1	4,02	513,26
2624				51,0	4,08	578,18
2625				54,1	4,17	547,21
2626				65,2	4,26	611,11
2627				83,9	4,16	527,27
2628				60,2	4,18	592,21
2629				63	4,3	561,21
2630				74,0	4,36	625,11

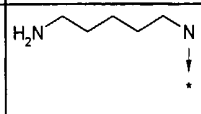
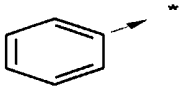
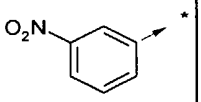
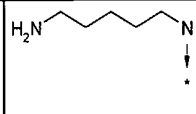
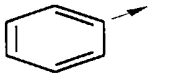
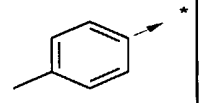
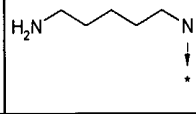
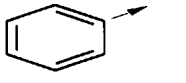
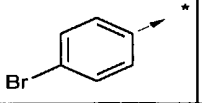
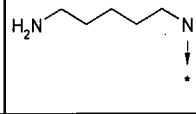
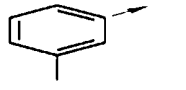
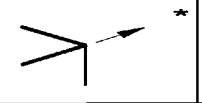
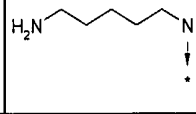
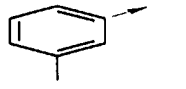
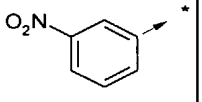
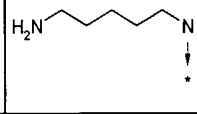
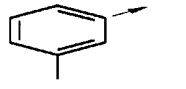
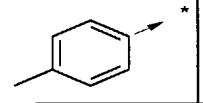
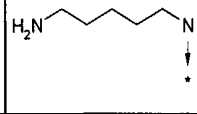
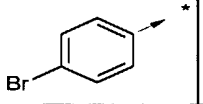
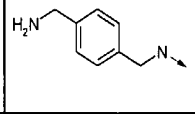
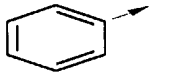
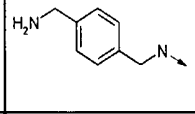
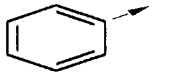
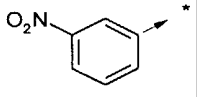
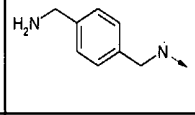
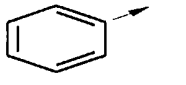
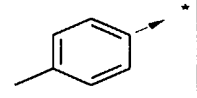
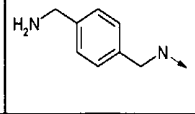
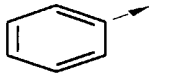
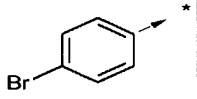
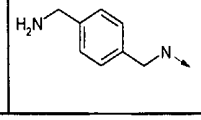
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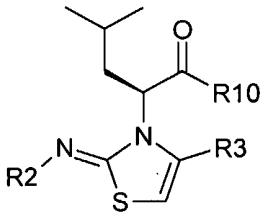
Ex.	R10	R2	R3	Pureté	tr (min.)	$[M+H]^+$
2631				83,1	4,06	515,26

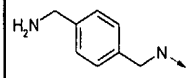
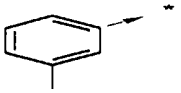
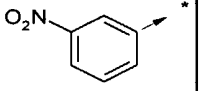
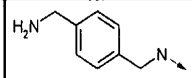
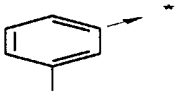
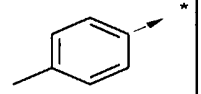
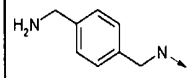
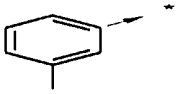
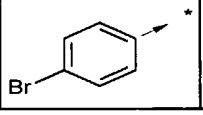
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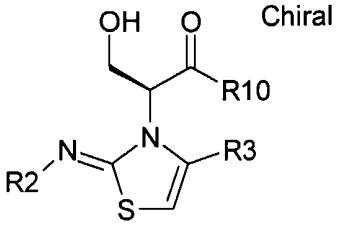


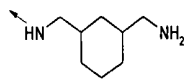
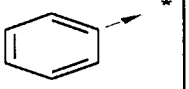
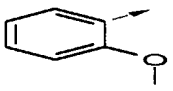
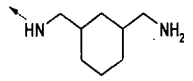
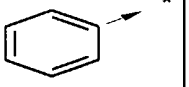
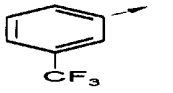
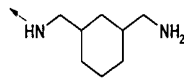
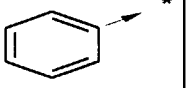
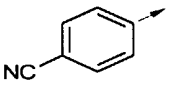
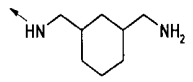
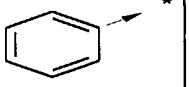
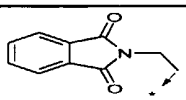
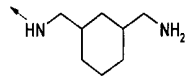
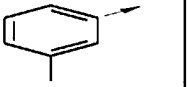
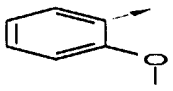
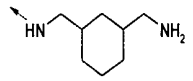
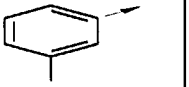
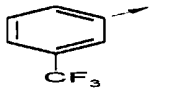
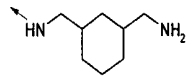
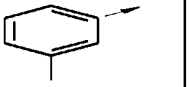
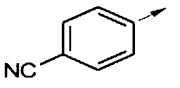
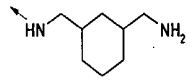
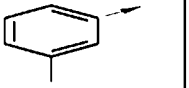
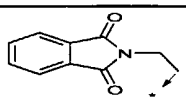
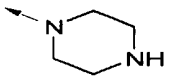
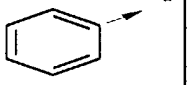
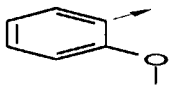
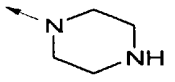
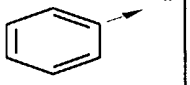
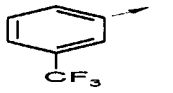
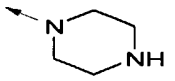
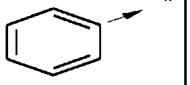
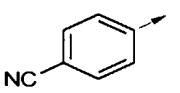
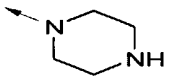
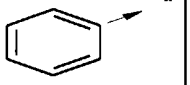
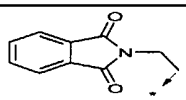
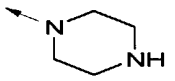
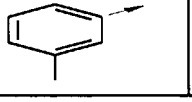
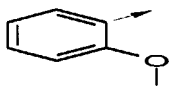
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
2632				57,8	4,13	580,20
2633				37,4	4,22	549,23
2634				43,3	4,31	613,12
2635				86,7	4,18	529,27
2636				64,3	4,22	594,19
2637				37,0	4,32	563,25
2638				44,3	4,4	627,15
2639				86,9	4,14	549,23
2640				53,4	4,23	614,17
2641				37	4,3	583,21
2642				45,7	4,4	647,11
2643				88,9	4,24	563,25

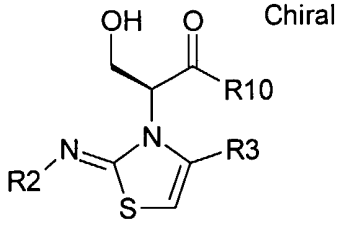
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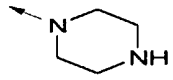
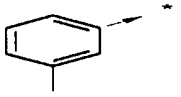
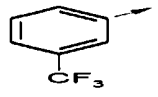
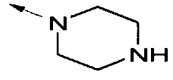
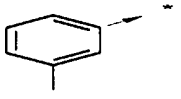
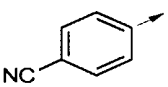
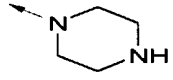
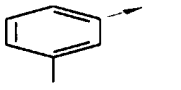
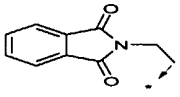


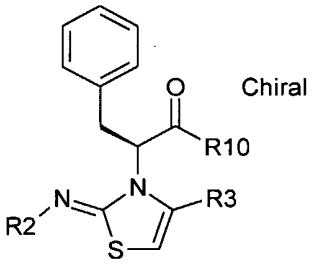
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
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2645				39,4	4,39	597,22
2646				44,1	4,48	661,15

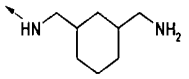
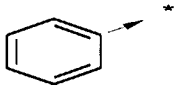
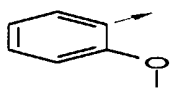
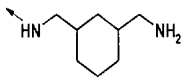
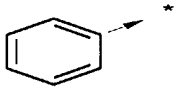
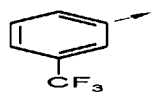
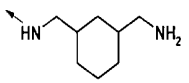
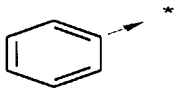
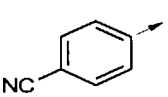
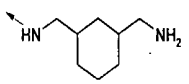
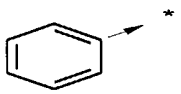
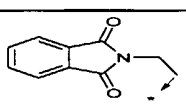
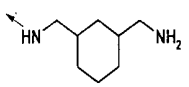
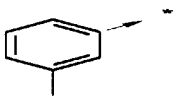
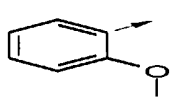
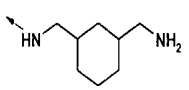
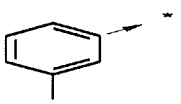
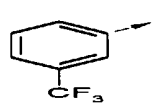
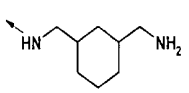
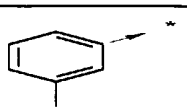
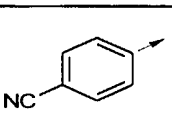


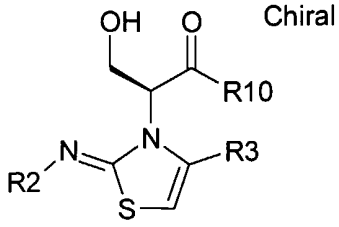
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
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2648				33,1	3,59	533,15
2649				27,0	3	490,2
2650				33,6	3,14	562,16
2651				27,2	3,36	509,21
2652				32,5	3,76	547,16
2653				29,7	3,2	504,2
2654				34,8	3,32	576,21
2655				73,7	2,93	439,15
2656				60,6	3,37	477,14
2657				65,1	2,7	434,1
2658				69,3	2,92	506,14
2659				72,5	3,14	453,17

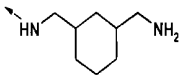
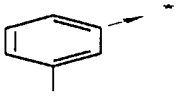
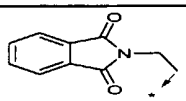
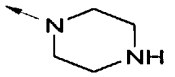
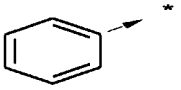
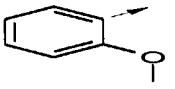
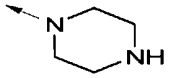
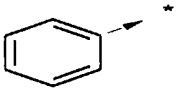
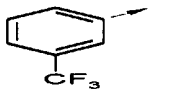
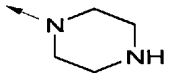
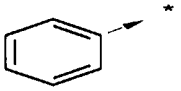
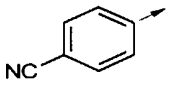
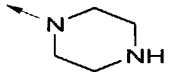
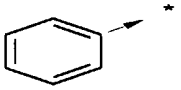
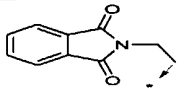
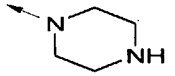
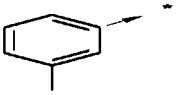
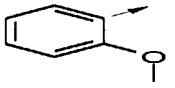
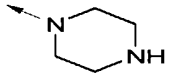
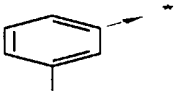
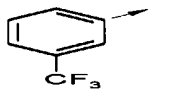
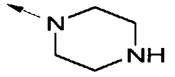
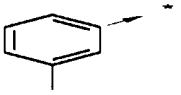
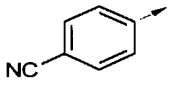
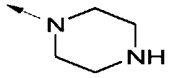
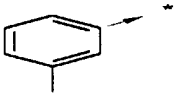
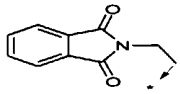


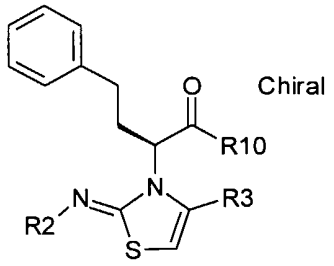
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
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2661				66,4	2,9	448,1
2662				65,9	3,14	520,15

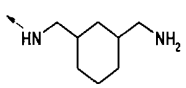
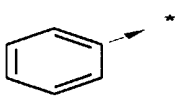
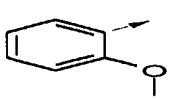


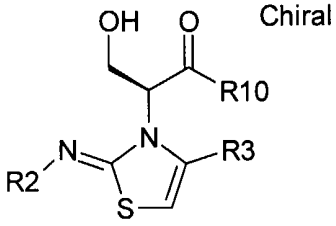
Ex.	R10	R2	R3	Pureté	tr (min.)	$[M+H]^+$
2663				63,3	3,82	555,21
2664				85,8	4,24	593,19
2665				87,5	3,8	550,2
2666				75,1	3,78	622,22
2667				66,1	3,98	569,21
2668				87,2	4,35	607,21
2669				82,9	3,9	564,2

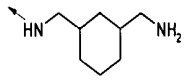
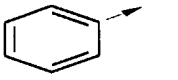
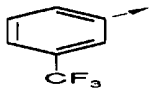
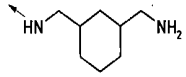
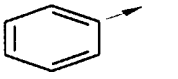
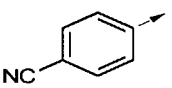
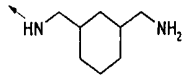
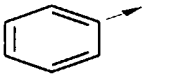
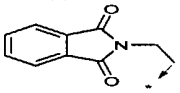
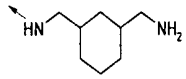
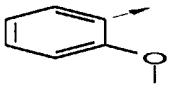
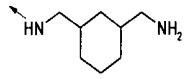
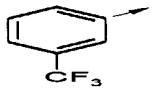
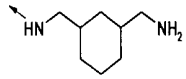
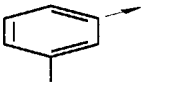
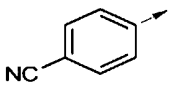
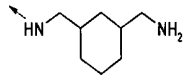
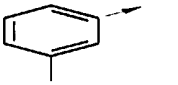
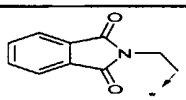
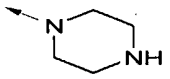
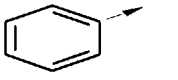
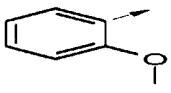
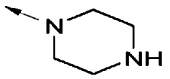
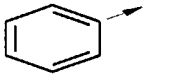
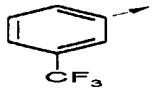
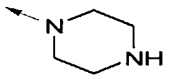
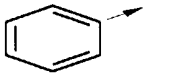
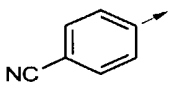
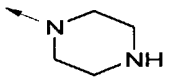
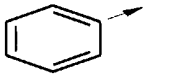
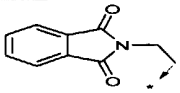
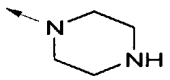
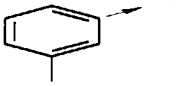
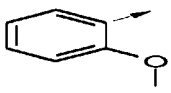
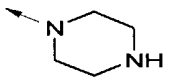
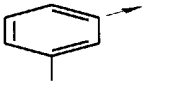
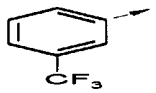


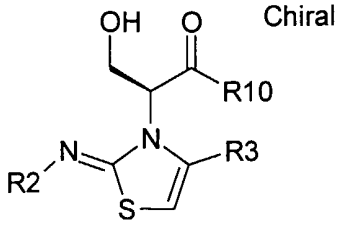
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
2670				79,1	3,94	636,25
2671				82,0	3,55	499,18
2672				82,2	3,93	537,14
2673				86,4	3,4	494,2
2674				90,4	3,52	566,15
2675				88,0	3,72	513,19
2676				88,8	4,08	551,15
2677				88,9	3,6	508,2
2678				93,6	3,7	580,17

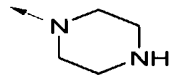
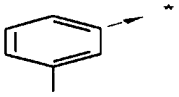
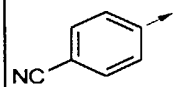
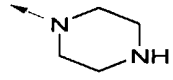
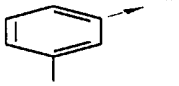
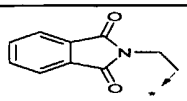


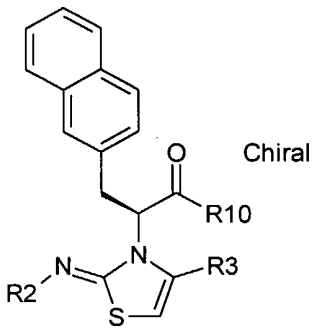
Ex.	R10	R2	R3	Pureté	tr (min.)	$[M+H]^+$
2679				59,5	4	569,20

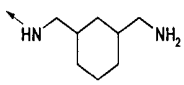
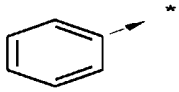
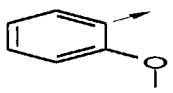
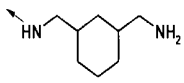
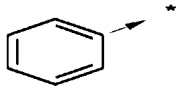
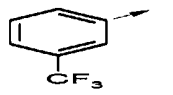
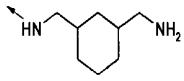
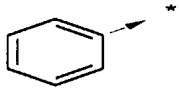
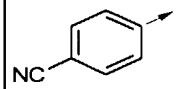
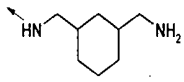
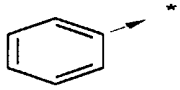
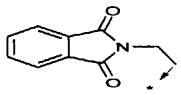
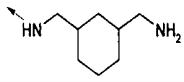
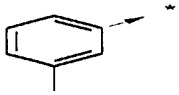
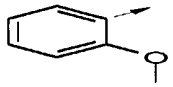
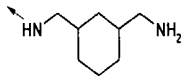
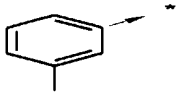
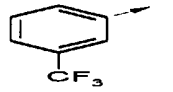
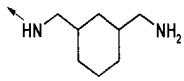
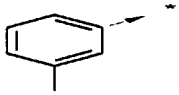
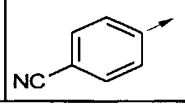


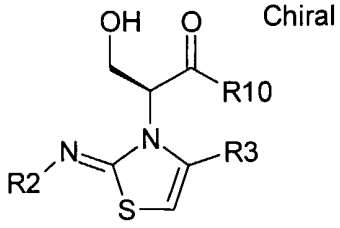
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
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2681				74,9	3,9	564,2
2682				70,6	3,94	636,26
2683				55,3	4,14	583,24
2684				85,3	4,49	621,22
2685				86,1	4,1	578,2
2686				72,7	4,09	650,26
2687				87,5	3,74	513,20
2688				86,1	4,1	551,16
2689				87,4	3,6	508,2
2690				87,9	3,73	580,18
2691				87,2	3,89	527,21
2692				88,3	4,24	565,15

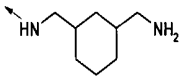
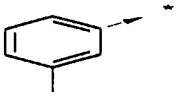
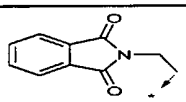
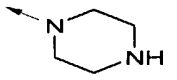
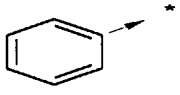
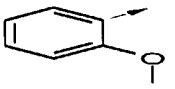
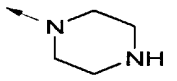
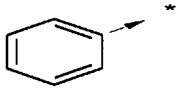
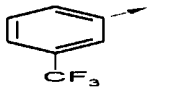
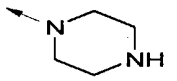
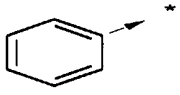
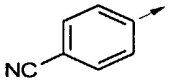
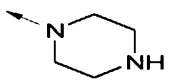
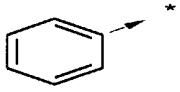
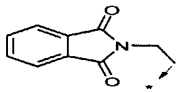
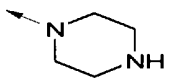
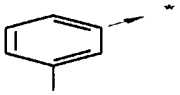
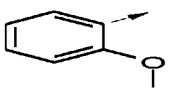
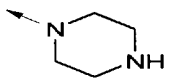
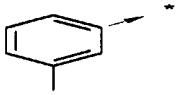
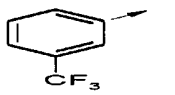
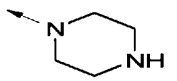
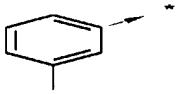
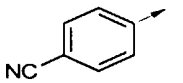
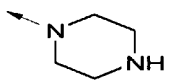
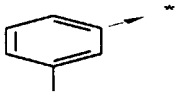
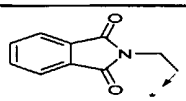


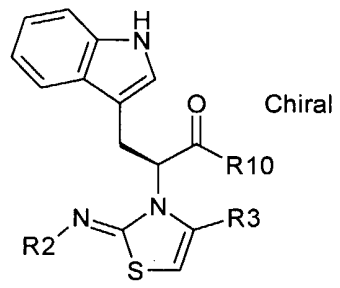
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
2693				89,8	3,8	522,2
2694				92,5	3,86	594,17

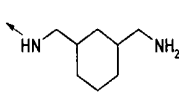
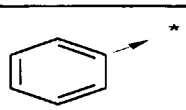
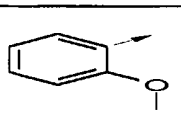


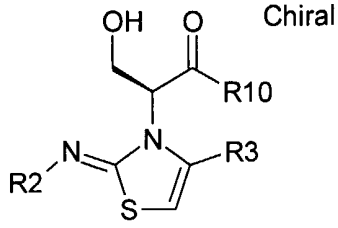
Ex.	R10	R2	R3	Pureté	tr (min.)	$[M+H]^+$
2695				69,9	4,14	605,25
2696				81,8	4,55	643,21
2697				65,3	4,1	600,2
2698				69,2	4,11	672,25
2699				74,0	4,28	619,24
2700				69,3	4,67	657,24
2701				75,9	4,3	614,2

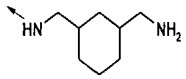
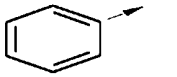
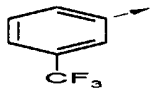
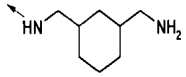
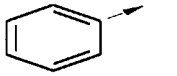
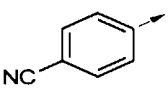
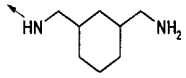
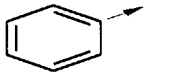
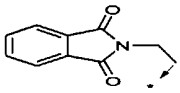
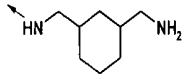
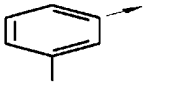
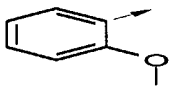
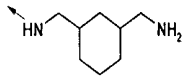
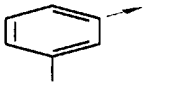
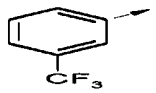
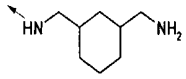
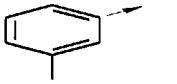
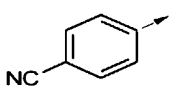
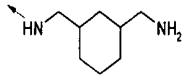
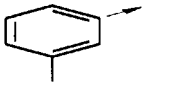
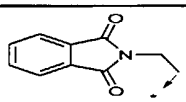
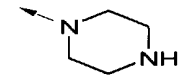
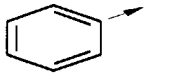
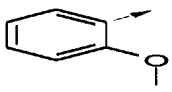
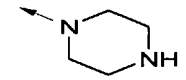
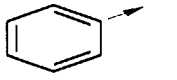
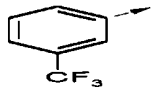
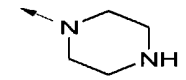
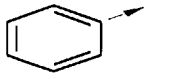
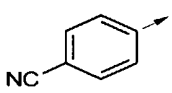
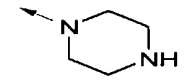
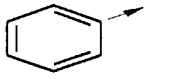
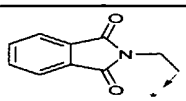
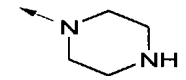
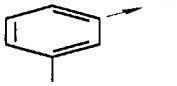
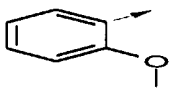
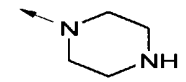
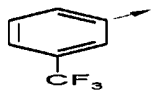


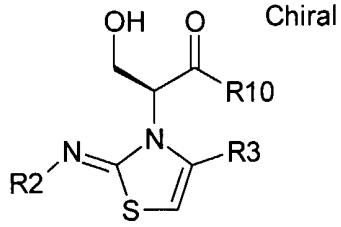
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
2702				84,8	4,27	686,27
2703				86,6	3,91	549,16
2704				77,7	4,26	587,13
2705				69,4	3,8	544,1
2706				88,0	3,9	616,19
2707				79,9	4,06	563,18
2708				75,9	4,38	601,14
2709				62	3,9	603,2
2710				87,7	4,05	630,21

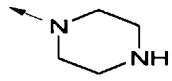
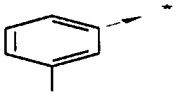
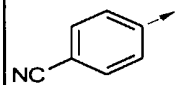
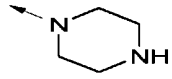
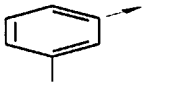
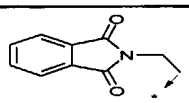


Ex.	R10	R2	R3	Pureté	tr (min.)	$[M+H]^+$
2711				56,8	3,85	594,20

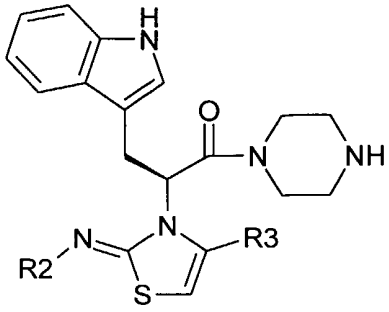


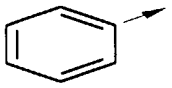
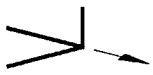
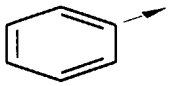
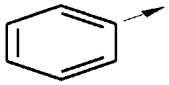
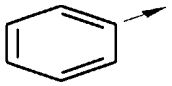
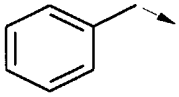
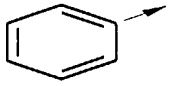
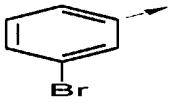
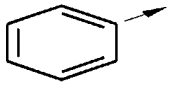
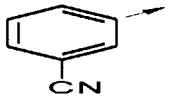
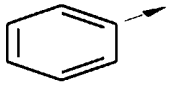
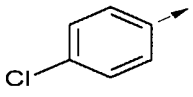
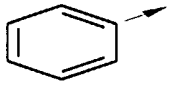
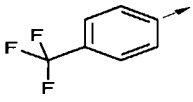
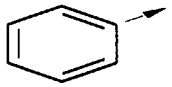
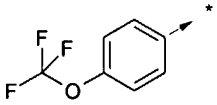
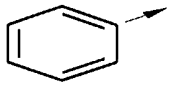
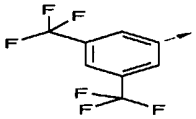
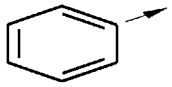
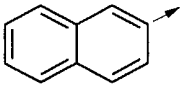
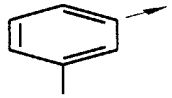
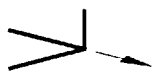
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
2712				69,7	4,18	632,22
2713				62,2	3,7	589,2
2714				79,2	3,76	661,23
2715				56,8	4	608,23
2716				70,5	4,31	646,23
2717				62	3,9	603,2
2718				76,9	3,92	675,26
2719				75,5	3,63	538,18
2720				79,4	3,96	576,13
2721				73	3,5	533,2
2722				87,0	3,56	605,17
2723				81,8	3,8	552,18
2724				80,1	4,11	590,15



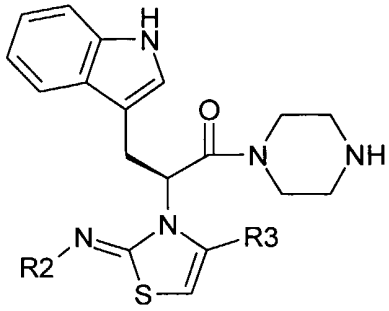
Ex.	R10	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
2725				79,4	3,6	547,2
2726				86,3	3,73	619,18

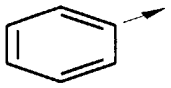
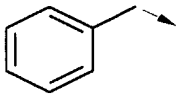
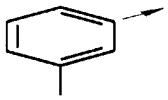
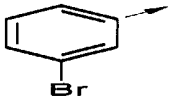
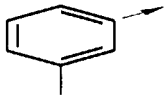
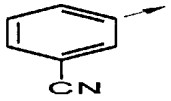
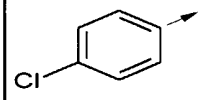
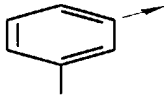
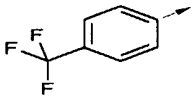
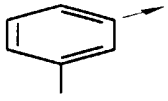
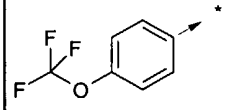
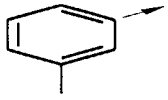
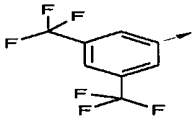
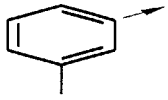
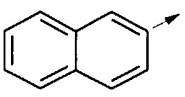
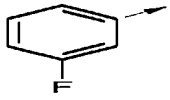
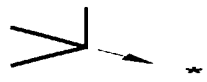
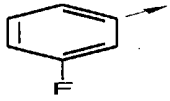
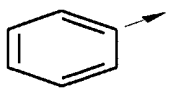
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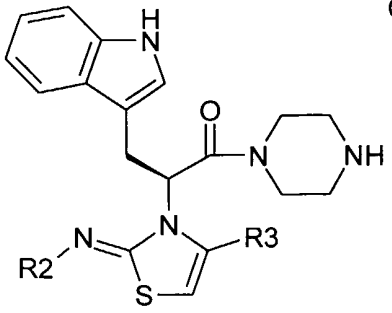
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
2727			73,7	4,7	488,3
2728			87,1	4,2	508,2
2729			90,3	4,3	522,3
2730			78,2	4,5	586,1
2731			73	4,1	533,2
2732			86,4	4,5	542,2
2733			77,7	4,6	576,2
2734			80	4,7	592,2
2735			76,4	4,9	644,2
2736			81,4	4,6	558,2
2737			79,8	4,4	502,3

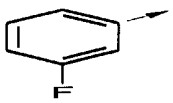
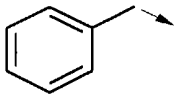
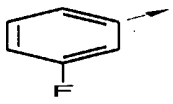
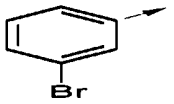
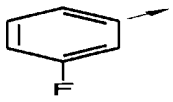
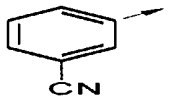
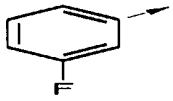
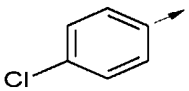
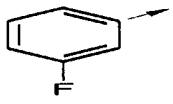
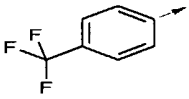
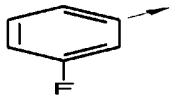
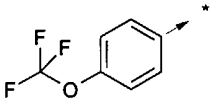
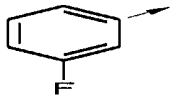
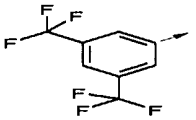
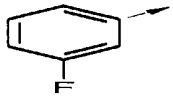
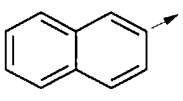
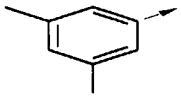
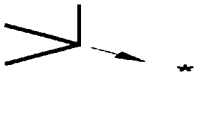
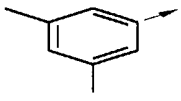
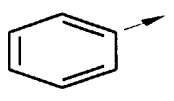
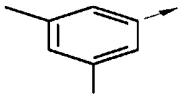
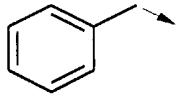
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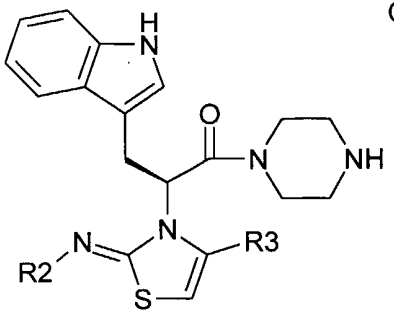
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
2738			87,5	4,4	522,3
2739			91,4	4,5	536,3
2740			83,3	4,6	600,1
2741			82	4,3	547,2
2742			83,9	4,6	556,2
2743			85,4	4,7	590,2
2744			85,2	4,8	606,2
2745			82	4,3	658,2
2746			86,7	4,7	572,2
2747			31,6	4,3	506,3
2748			71,1	4,3	526,2

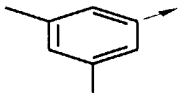
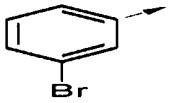
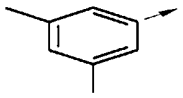
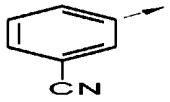
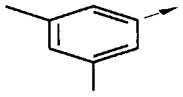
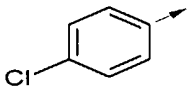
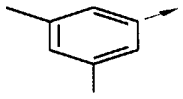
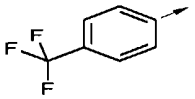
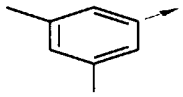
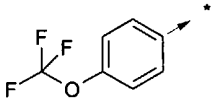
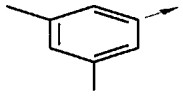
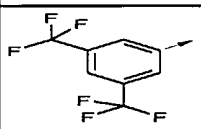
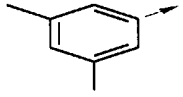
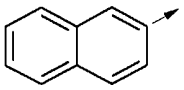
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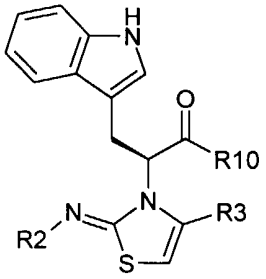
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
2749			89,5	4,4	540,2
2750			59,6	4,5	604,1
2751			51,3	4,2	551,2
2752			62,2	4,5	560,2
2753			59,6	4,7	594,2
2754			63	4,7	610,2
2755			52,5	4,9	662,2
2756			67,8	4,6	576,1
2757			81,1	4,6	516,3
2758			85,8	4,5	536,3
2759			85,4	4,7	550,3

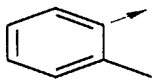
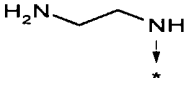
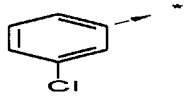
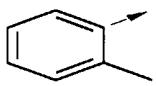
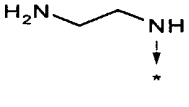
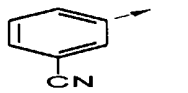
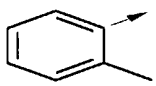
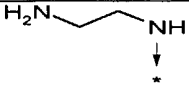
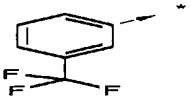
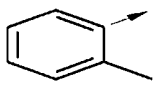
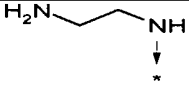
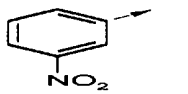
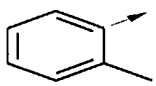
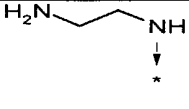
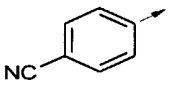
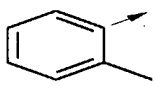
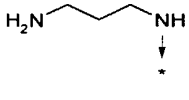
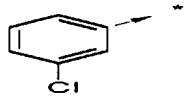
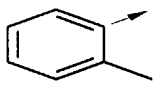
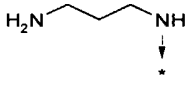
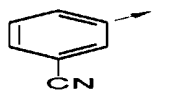
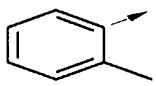
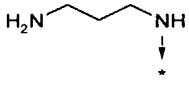
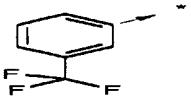
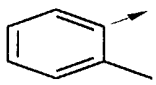
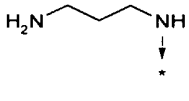
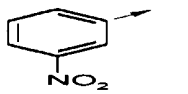
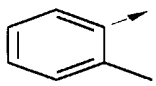
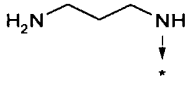
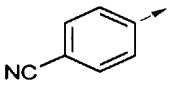
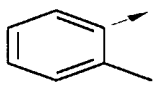
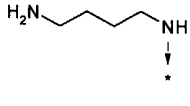
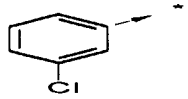
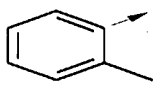
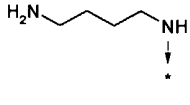
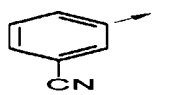
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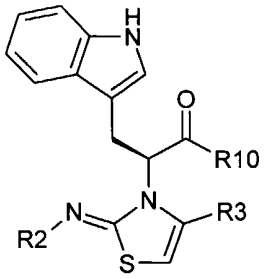
Ex.	R2	R3	Pureté (%)	tr (min.)	$[M+H]^+$
2760			76,6	4,7	614,1
2761			77,2	4,4	561,2
2762			85,4	4,7	570,2
2763			79,7	4,8	604,2
2764			81,1	4,9	620,2
2765			79,2	5,1	672,2
2766			82	4,8	586,3

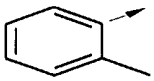
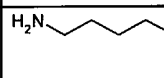
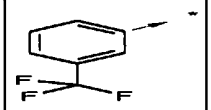
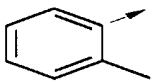
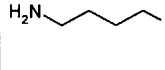
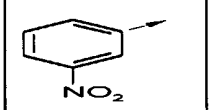
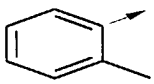
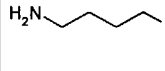
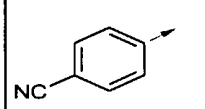
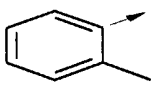
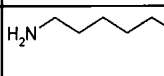
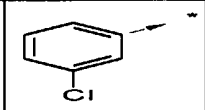
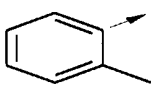
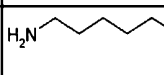
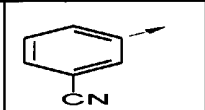
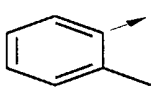
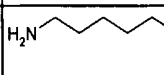
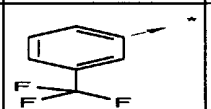
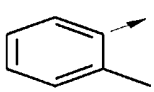
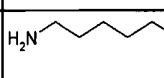
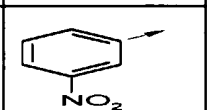
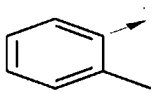
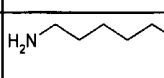
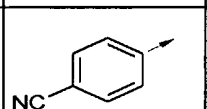
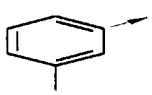
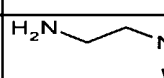
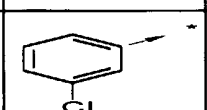
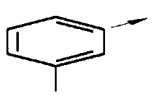
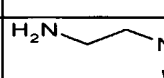
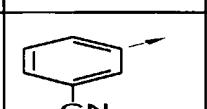
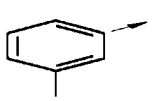
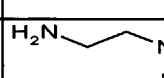
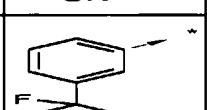
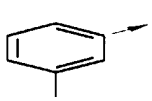
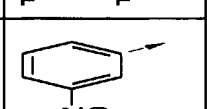
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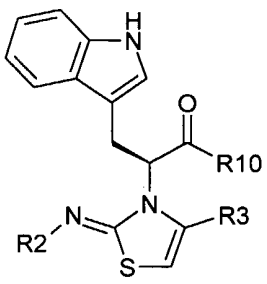
Ex.	R2	R10	R3	Pureté (%)	tr (min.)	[M+H]+
2767				64,3	3,91	530,20
2768				58,3	3,57	521,22
2769				66,7	4,03	564,20
2770				65,1	3,71	541,19
2771				56,1	3,58	521,21
2772				42,1	3,93	544,19
2773				34,6	3,59	535,22
2774				46,9	4,05	578,21
2775				33,3	3,73	555,19
2776				33,4	3,6	535,22
2777				39,6	3,97	558,22
2778				47,5	3,63	549,23

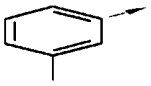
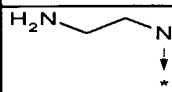
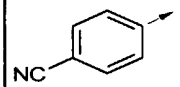
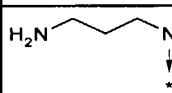
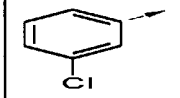
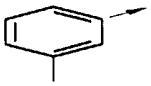
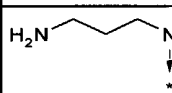
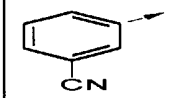
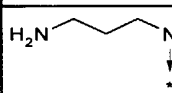
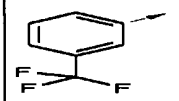
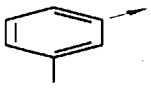
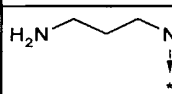
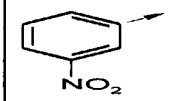
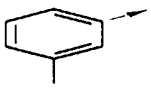
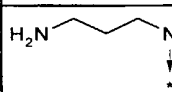
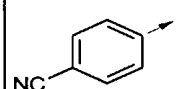
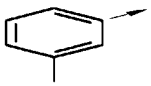
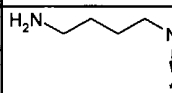
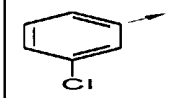
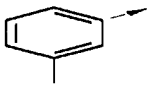
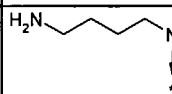
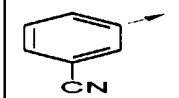
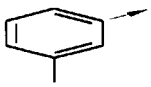
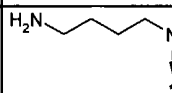
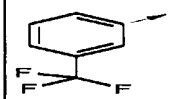
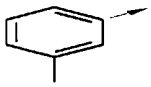
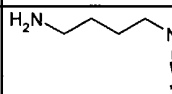
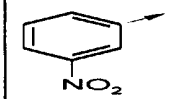
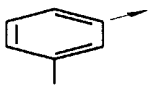
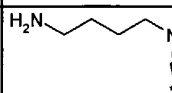
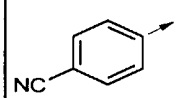
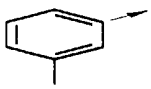
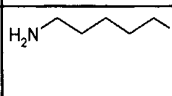
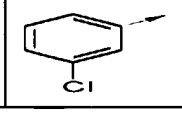
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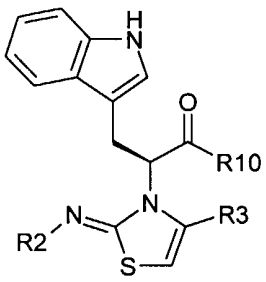
Ex.	R2	R10	R3	Pureté (%)	tr (min.)	[M+H]+
2779				50,3	4,09	592,23
2780				40,6	3,76	569,19
2781				42,7	3,63	549,25
2782				35,5	4.0	572,17
2783				33,2	3,69	563,26
2784				45	4,1	606,27
2785				36,0	3,82	583,23
2786				27,1	3,7	563,26
2787				73,6	3,98	530,19
2788				62,5	3,64	521,21
2789				74,8	4,09	564,2
2790				67,7	3,77	541,20

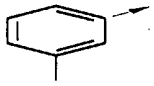
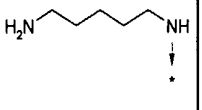
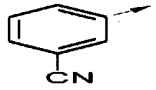
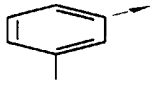
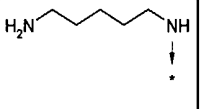
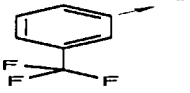
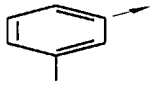
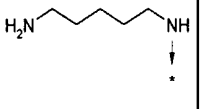
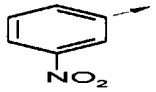
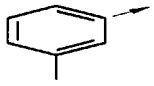
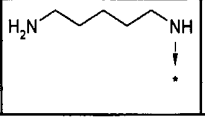
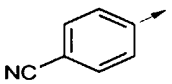
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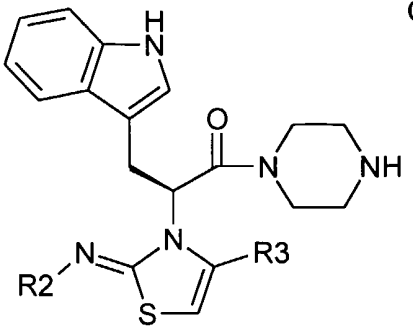
Ex.	R2	R10	R3	Pureté (%)	tr (min.)	[M+H]+
2791				71,3	3,65	521,21
2792				52,4	4.0	544,18
2793				47,0	3,65	535,22
2794				54,7	4,11	578,22
2795				43,7	3,79	555,20
2796				44,6	3,67	535,22
2797				53,7	4,03	558,20
2798				51,0	3,69	549,23
2799				56,5	4,15	592,23
2800				48,9	3,83	569,20
2801				46,0	3,7	549,24
2802				41,2	4,1	572,21

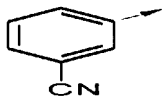
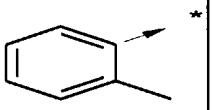
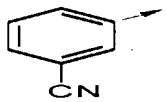
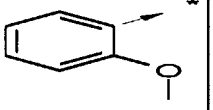
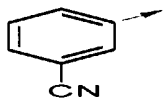
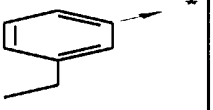
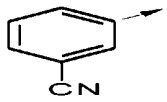
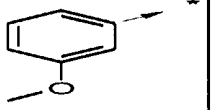
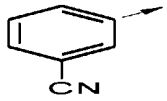
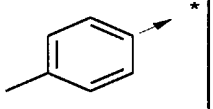
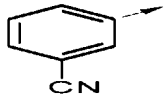
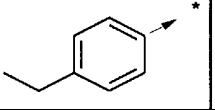
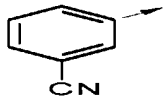
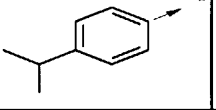
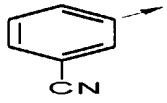
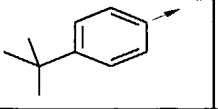
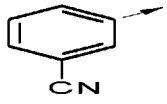
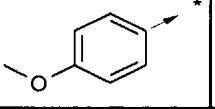
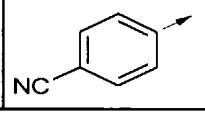
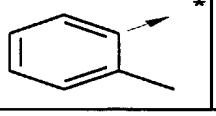
Chiral



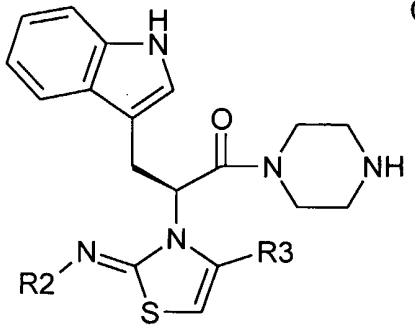
Ex.	R2	R10	R3	Pureté (%)	tr (min.)	[M+H]+
2803				36,7	3,76	563,26
2804				47,4	4,2	606,26
2805				37,0	3,89	583,22
2806				37,3	3,76	563,26

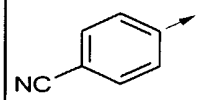
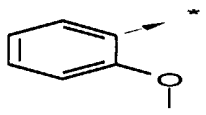
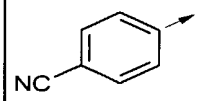
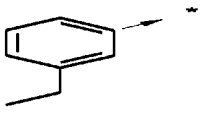
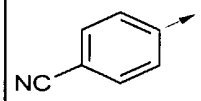
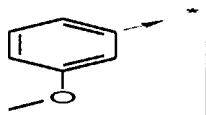
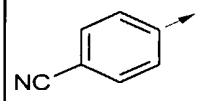
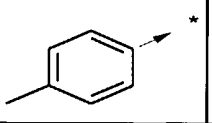
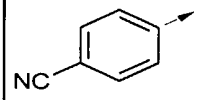
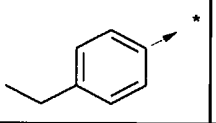
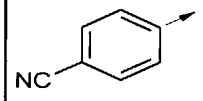
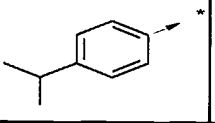
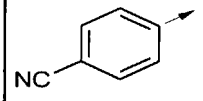
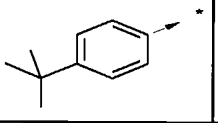
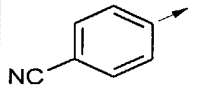
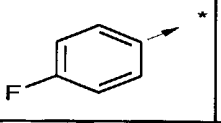
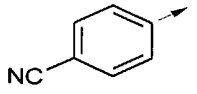
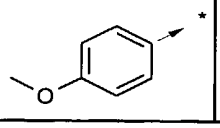
Chiral



Ex.	R3	R2	Pureté (%)	tr (min.)	$[M+H]^+$
2807			52,1	3,65	547,22
2808			61,7	3,61	563,24
2809			54,1	3,91	561,26
2810			56,7	3,69	563,23
2811			54,7	3,65	547,23
2812			63,6	3,96	561,25
2813			66,1	4,13	575,26
2814			34,9	4,29	589,29
2815			69,3	3,66	563,24
2816			47,6	3,66	547,23

Chiral



Ex.	R3	R2	Pureté (%)	tr (min.)	$[M+H]^+$
2817			41,4	3,61	563,23
2818			28,5	3,97	561,24
2819			56,4	3,71	563,23
2820			45,6	3,65	547,22
2821			62,6	3,99	561,24
2822			42,0	4,17	575,26
2823			45,7	4,32	589,28
2824			23,5	3,65	551,21
2825			70,9	3,67	563,22

PROPRIETES PHARMACOLOGIQUES DES PRODUITS DE L'INVENTION

Les composés de la présente invention peuvent et ont été testés en ce qui concerne leur affinité pour différents sous-types de récepteurs de la somatostatine selon les procédures décrites ci-après.

Etude de l'affinité pour les sous-types de récepteurs de la somatostatine humaine :

L'affinité d'un composé de l'invention pour les sous-types de récepteurs de la somatostatine 1 à 5 (sst_1, sst_2, sst_3, sst_4 et sst_5, respectivement) est déterminée par la mesure de l'inhibition de la liaison de [^{125}I-Tyr^{11}]SRIF-14 à des cellules transfectées CHO-K1.

Le gène du récepteur sst_1 de la somatostatine humaine a été cloné sous forme d'un fragment génomique. Un segment *Pst*I-X*mn*I de 1,5 Kb contenant 100 pb de la région 5' non transcrite, 1,17 Kb de la région codante en totalité, et 230 bp de la région 3' non transcrite est modifié par l'addition du linker Bg1II. Le fragment d'ADN résultant est sous-cloné dans le site *BamH*I d'un pCMV-81 pour donner le plasmide d'expression chez les mammifères (fourni par Dr. Graeme Bell, Univ. Chicago). Une lignée de cellules clonées exprimant de façon stable le récepteur sst_1 est obtenue par transfection dans des cellules CHO-K1 (ATCC) grâce à la méthode de co-précipitation calcium phosphate. Le plasmide pRSV-neo (ATCC) est inclus comme marqueur de sélection. Des lignées de cellules clonées ont été sélectionnées dans un milieu RPMI 1640 contenant 0,5 mg/ml de G418 (Gibco), clonées en cercle, et multipliées en culture.

Le gène du récepteur sst_2 de la somatostatine humaine, isolé sous forme d'un fragment génomique d'ADN de 1.7 Kb *Bam*HI-*Hind*III et sous-cloné dans un vecteur plasmidique pGEM3Z (Promega), a été fourni par le Dr. G. Bell (Univ. of Chicago). Le vecteur d'expression des cellules de mammifères est construit en insérant le fragment *Bam*H1-*Hind*II de 1,7 Kb dans des sites de restriction endonucléase compatibles du plasmide pCMV5. Une lignée de cellules clonées est obtenue par transfection dans des cellules CHO-K1 grâce à la méthode de co-précipitation calcium phosphate. Le plasmide pRSV-neo est inclus comme marqueur de sélection.

Le récepteur sst_3 est isolé comme fragment génomique, et la séquence codante complète est contenue dans un fragment *Bam*HI/*Hind*III de 2,4 Kb. Le plasmide d'expression chez les mammifères, pCMV-h3, est construit par insertion du fragment *Nco*I-*Hind*III de 2,0 Kb dans le site EcoR1 du vecteur pCMV après modification des terminaisons et addition de linkers EcoR1. Une lignée de cellules clonées exprimant de façon stable le récepteur sst3 est obtenue par transfection dans des cellules CHO-K1 (ATCC) par la méthode de co-précipitation au phosphate de calcium. Le plasmide pRSV-neo (ATCC) est inclus comme marqueur de sélection. Des lignées de cellules clonées ont été sélectionnées dans un milieu RPMI 1640 contenant 0,5 mg/ml de G418 (Gibco), clonées en cercle, et multipliées en culture.

Le plasmide d'expression du récepteur sst_4 humain, pCMV-HX, a été fourni par le Dr. Graeme Bell (Univ. Chicago). Ce vecteur contient le fragment génomique codant pour le récepteur sst_4 humain de 1,4 Kb *Nhe*I-*Nhe*I, 456 pb de la région 5' non transcrite, et 200 pb de la région 3' non transcrite, cloné dans les sites *Xba*I/*Eco*R1 de PCMV-HX. Une lignée de cellules clonées exprimant de façon stable le récepteur sst_4 est obtenue par transfection dans des cellules CHO-K1 (ATCC) par la méthode de co-précipitation au phosphate de calcium. Le plasmide pRSV-neo (ATCC) est inclus comme marqueur de sélection. Des lignées de cellules clonées ont été sélectionnées dans un milieu RPMI 1640 contenant 0,5 mg/ml de G418 (Gibco), clonées en cercle, et multipliées en culture.

Le gène correpondant au récepteur sst_5 humain, obtenu par la méthode PCR en utilisant un clone génomique λ comme sonde, a été fourni par le Dr. Graeme Bell (Univ. Chicago). Le fragment PCR résultant de 1,2 Kb contient 21 paires de bases de la région 5' non transcrites, la région codante en totalité, et 55 pb de la région 3' non transcrite. Le clone est inséré dans un site EcoR1 du plasmide pBSSK(+). L'insert est récupéré sous la forme d'un fragment *Hind*III-*Xba*I de 1,2 Kb pour sousclonage dans un vecteur d'expression chez les mammifères, pCVM5. Une lignée de cellules clonées exprimant de façon stable le récepteur sst_5 est obtenue par transfection dans des cellules CHO-K1 (ATCC) par la méthode de co-précipitation au phosphate de calcium. Le plasmide pRSV-neo (ATCC) est inclus comme marqueur de sélection. Des lignées de cellules clonées ont été sélectionnées dans un milieu RPMI 1640 contenant 0,5 mg/ml de G418 (Gibco), clonées en cercle, et multipliées en culture.

Les cellules CHO-K1 exprimant de façon stable l'un des récepteurs sst humain sont cultivées dans un milieu RPMI 1640 contenant 10% de sérum foetal de veau et 0,4 mg/ml de généticine. Les cellules sont collectées avec de l'EDTA 0,5 mM et centrifugées à 500 g pendant environ 5 min à environ 4 °C. Le centrifugat est re-

suspendu dans un milieu tampon 50 mM Tris à pH 7,4 et centrifugé deux fois à 500 g pendant environ 5 min à environ 4 °C. Les cellules sont lysées par sonication et centrifugées à 39000 g pendant environ 10 min à 4 °C. Le centrifugat est re-suspendu dans le même milieu tampon et centrifugé at 50000 g pendant 10 min à environ 4 °C et les membranes dans le centrifugat obtenu sont stockées à - 80 °C.

Des tests d'inhibition compétitive de liaison avec [^{125}I-Tyr^{11}]SRIF-14 sont effectués en double à l'aide de plaques en polypropylène de 96 puits. Les membranes cellulaires (10 µg protéine/puits) sont incubées avec [^{125}I-Tyr^{11}]SRIF-14 (0,05 nM) pendant environ 60 min à environ 37 °C dans un milieu tampon 50 mM HEPES (pH 7,4) comprenant 0,2% BSA, 5 mM de $MgCl_2$, 200 KIU/ml de Trasylol, 0,02 mg/ml de bacitracine et 0,02 mg/ml de fluorure de phénylméthylsulphonyle.

La [^{125}I-Tyr^{11}]SRIF-14 liée est séparée de la [^{125}I-Tyr^{11}]SRIF-14 libre par filtration immédiate à travers des plaques filtres en fibre de verre GF/C (Unifilter, Packard) préimprégné avec 0,1 % de polyéthylènimine (P.E.I.), en utilisant un Filtermate 196 (Packard). Les filtres sont lavés avec du tampon 50 mM HEPES à environ 0-4 °C pendant environ 4 secondes et leur radioactivité est déterminée à l'aide d'un compteur (Packard Top Count).

La liaison spécifique est obtenue en soustrayant la liaison non spécifique (déterminée en présence de 0,1 µM SRIF-14) de la liaison totale. Les données relatives à la liaison sont analysées par analyse en régression non-linéaire assistée par ordinateur (MDL) et les valeurs des constantes d'inhibition (Ki) values sont déterminées.

La détermination du caractère agoniste ou antagoniste d'un composé de la présente invention est effectuée à l'aide du test décrit ci-après.

Test fonctionnel : Inhibition de la production d'AMPc intracellulaire :

Des cellules CHO-K1 exprimant les sous-types de récepteurs de la somatostatine humaine (SRIF-14) sont cultivées dans des plaques à 24 puits dans un milieu RPMI 1640 avec 10% de sérum foetal de veau et 0,4 mg/ml de généticine. Le milieu est changé le jour précédant l'expérience.

Les cellules à raison de 10^5 cellules/puits sont lavées 2 fois avec 0,5 ml de nouveau milieu RPMI comprenant 0,2 % BSA complété par 0,5 mM de 3-isobutyl-1-méthylxanthine (IBMX) et incubées pendant environ 5 min à environ 37 °C.

La production d'AMP cyclique est stimulée par l'addition de 1 mM de forskoline (FSK) pendant 15-30 minutes à environ 37 °C.

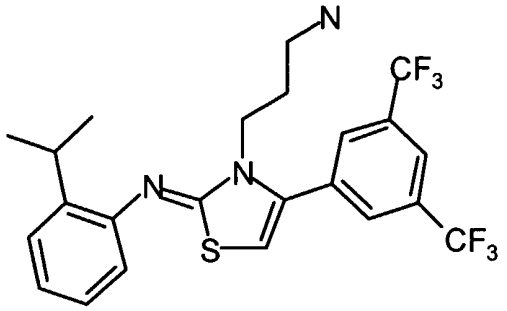
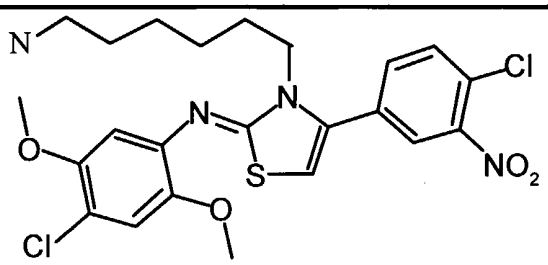
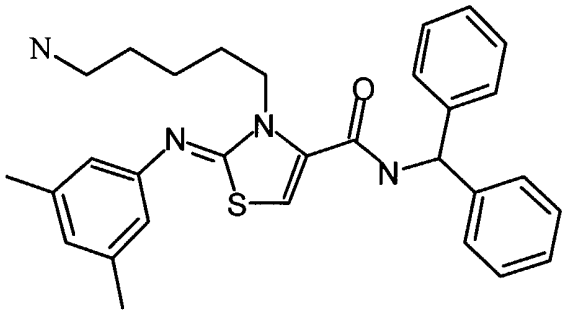
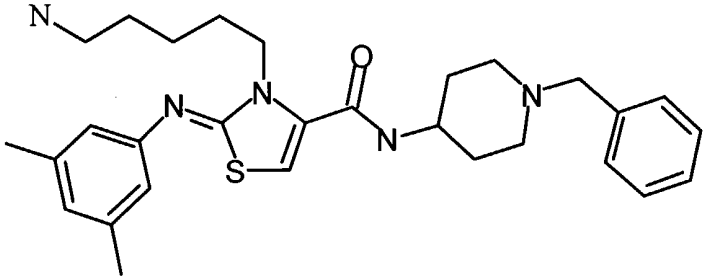
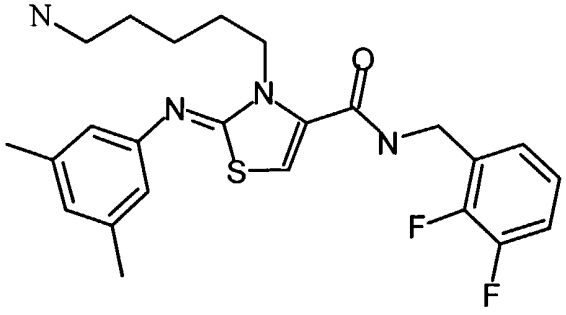
L'effet inhibiteur de la somatostatine d'un composé agoniste est mesuré par l'addition simultanée de FSK (1µM) , SRIF-14 (10^{-12} M to 10^{-6} M) et du composé à tester (10^{-10} M à 10^{-5} M).

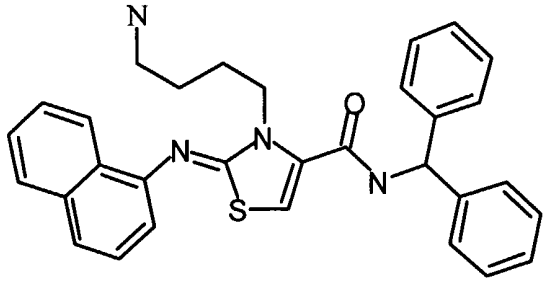
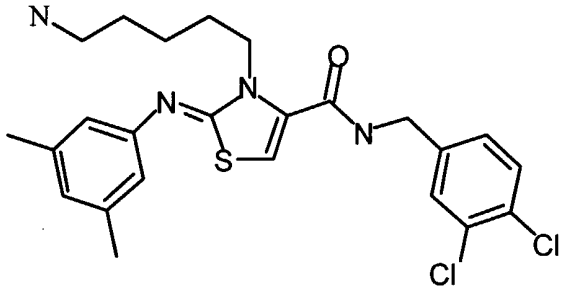
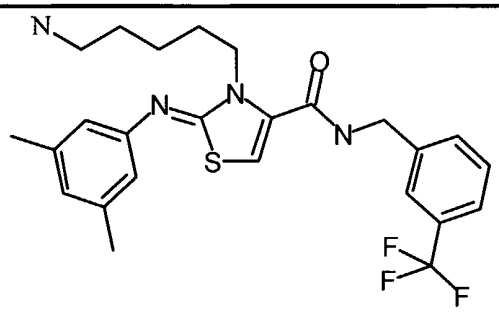
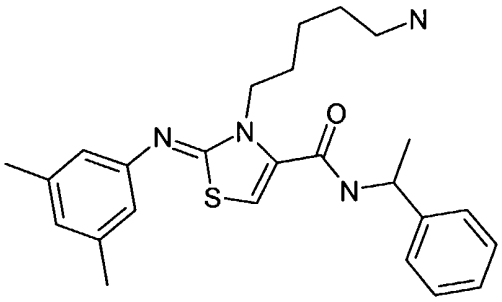
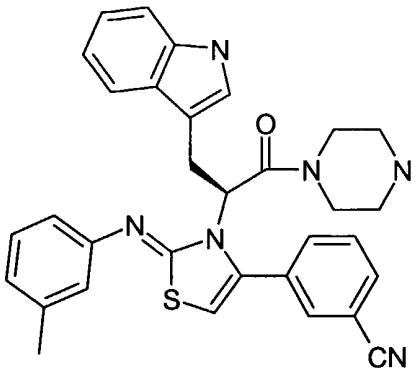
L'effet antagoniste d'un composé est mesuré par l'addition simultanée de FSK (1µM), SRIF-14 (1 to 10 nM) et du composé à tester (10^{-10} M to 10^{-5} M).

Le milieu réactionnel est éliminé et 200 ml de HCl 0,1 N sont ajoutés. La quantité d'AMPc est mesurée par un test radioimmunologique (Kit FlashPlate SMP001A, New England Nuclear).

Résultats :

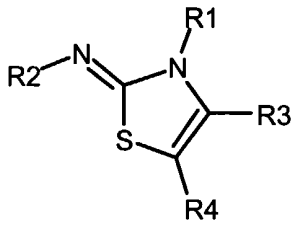
Les tests effectués selon les protocoles décrits ci-dessus ont permis de montrer que les produits de formule générale **(I)** définie dans la présente demande ont une bonne affinité pour au moins l'un des sous-types de récepteurs de la somatostatine, la constante d'inhibition K_i étant inférieure au micromolaire pour certains des composés exemplifiés, et en particulier pour les produits repris dans le tableau ci-après.

Formule du composé	K_i (nM)
	< 200
	< 200
	< 200
	< 200
	< 200

Formule du composé	K_i (nM)
	< 200
	< 200
	< 200
	< 200
	< 200

Revendications

1. Composé de formule générale **(I)**

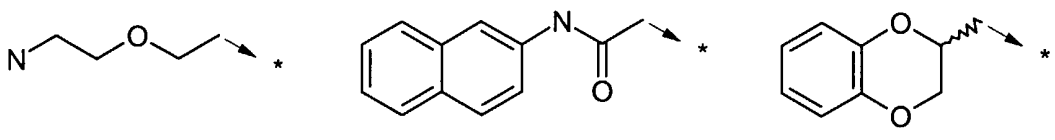


(I)

sous forme racémique, d'énantiomère ou toutes combinaisons de ces formes, dans laquelle :

R1 représente un radical amino(C_2-C_7)alkyle, aminoalkylarylalkyle, aminoalkylcycloalkylalkyle, (C_1-C_{15})alkyle, (C_3-C_7)cycloalkyle, (C_1-C_6)alkyl(C_3-C_6)cycloalkyle, (C_3-C_6)cycloalkylalkyle, cyclohexénylalkyle, alkényle, alkynyle, aryle carbocyclique comptant au moins deux cycles dont l'un au moins n'est pas aromatique, aralkyle carbocyclique ou hétérocyclique éventuellement substitué sur le groupe aryle, *bis*-arylalkyle, alkoxyalkyle, furannylalkyle, tétrahydrofurannylalkyle, dialkylaminoalkyle, N-acétamidoalkyle, cyanoalkyle, alkylthioalkyle, arylhydroxyalkyle, aralkoxyalkyle, morpholinoalkyle, pyrrolidinoalkyle, pipéridinoalkyle, N-alkylpyrrolidinoalkyle, N-alkylpipérazinylalkyle ou oxopyrrolidinoalkyle,

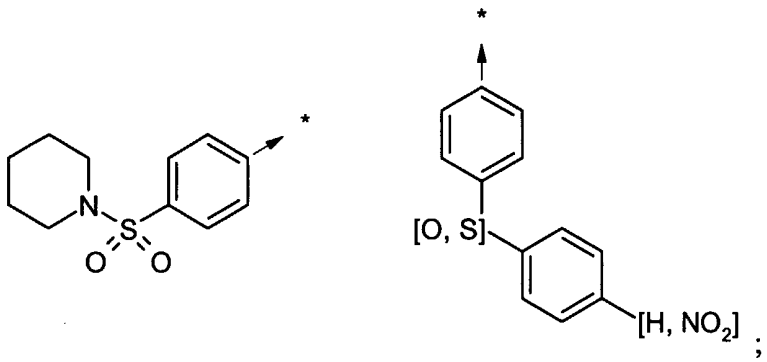
ou R1 représente l'un des radicaux représentés ci-dessous :



ou encore R1 représente un radical -C(R11)(R12)-CO-R10 ;

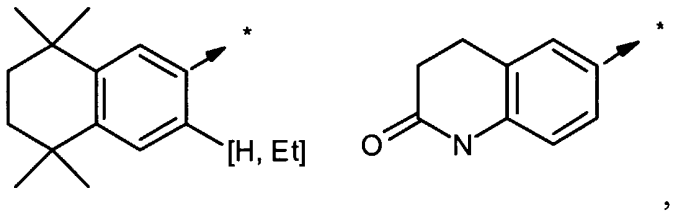
R2 représente un radical aryle carbocyclique ou hétérocyclique éventuellement substitué,

ou bien R2 représente l'un des radicaux représentés ci-dessous :



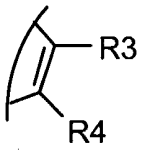
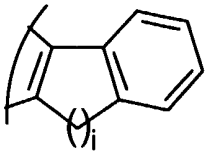
R3 représente un radical alkyle, adamantyle, aryle carbocyclique ou hétérocyclique éventuellement substitué, aralkyle carbocyclique ou hétérocyclique éventuellement substitué sur le groupe aryle,

ou R3 représente l'un des radicaux représentés ci-dessous :



ou encore R3 représente un radical -CO-R5 ;

R4 représente H, alkyle, aralkyle carbocyclique ou hétérocyclique éventuellement situé sur le radical aryle ;

ou alors le radical  représente un radical de formule générale 

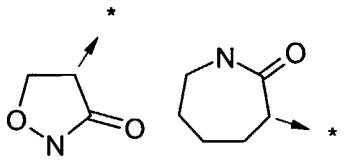
dans laquelle i représente un entier de 1 à 3 ;

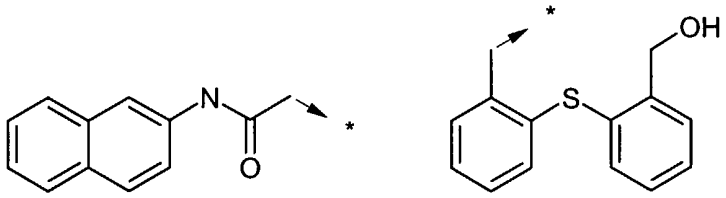
R5 représente le radical N(R6)(R7) ;

R6 représente un radical (C_1-C_{16})alkyle, cycloalkylalkyle, hydroxyalkyle, aryloxyalkyle, aralkyle carbocyclique ou hétérocyclique éventuellement substitué sur le groupe aryle, aralkoxyalkylke, arylhydroxyalkyle, alkoxyalkyle, alkylthioalkyle,

alkényle, alkynyle, cyclohexényle, cyclohexénylalkyle, alkylthiohydroxyalkyle, cyanoalkyle,
N-acétamidoalkyle, bis-arylalkyle éventuellement substitué sur les groupes aryle, di-arylalkyle éventuellement substitué sur les groupes aryle, morpholinoalkyle, pyrrolidinoalkyle, pipéridinoalkyle, N-alkylpyrrolidinoalkyle, oxopyrrolidinoalkyle, tétrahydrofurannylalkyle, N-benzylpyrrolidinoalkyle, N-alkylpipérazinylalkyle, N-benzylpipérazinylalkyle, N-benzylpipéridinylalkyle ou N-alkoxycarbonylpipéridinyle, ou R6 représente un radical (C_3-C_8)cycloalkyle éventuellement substitué par un radical choisi parmi le groupe composé du radical hydroxy et d'un radical alkyle,

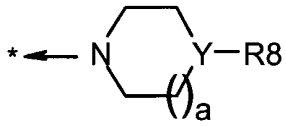
ou bien R6 représente l'un des radicaux représentés ci-dessous :





R7 représente H ou un radical alkyle, hydroxyalkyle, mono- ou di-aminoalkyle ou aralkyle ;

ou encore le radical -N(R6)(R7) représente le radical de formule générale suivante :



dans laquelle :

R8 représente H, alkyle, hydroxyalkyle, aryle carbocyclique ou hétérocyclique éventuellement substitué, aralkyle éventuellement substitué sur le groupe aryle, alkényle, alkoxyalkyle, cycloalkyle, cycloalkylalkyle, bis-arylalkyle, pipéridinyle, pyrrolidinyle, hydroxy, arylalkényle,

ou R8 représente -X-$(CH_2)_b$-R9 ;

R9 représente H ou un radical alkyle, alkoxy, aryloxy, aryle carbocyclique ou hétérocyclique éventuellement substitué, morpholinyle, pyrrolidinyle, alkylamino ou N,N'-(alkyl)(aryl)amino ;

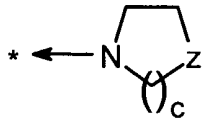
X représente CO, CO-NH ou SO_2 ;

Y représente CH ou N ;

a représente 1 ou 2 ;

b représente un entier de 0 à 6 ;

ou le radical N(R6)(R7) représente un radical de formule générale

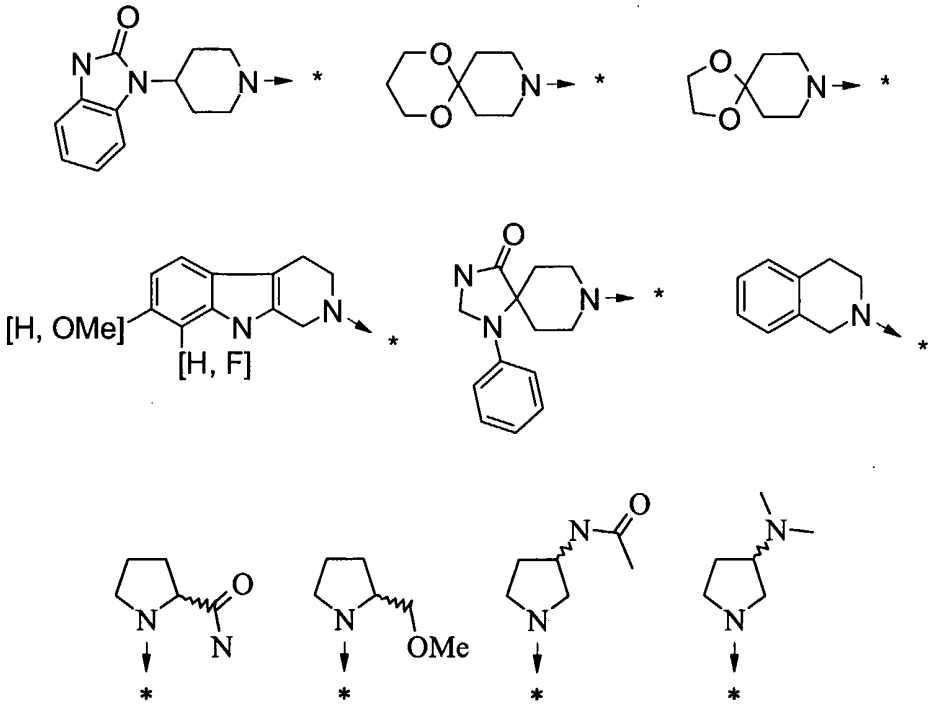


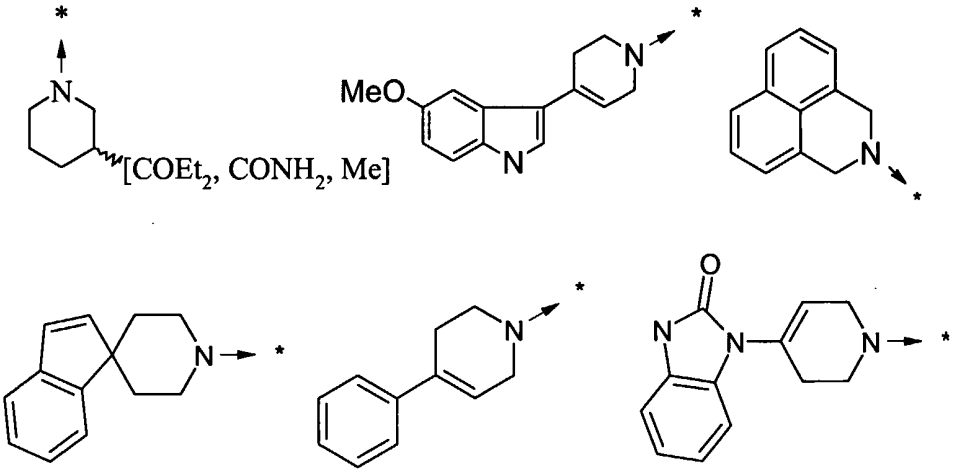
dans laquelle :

Z représente CH, O ou S ;

c représente un entier de 0 à 4 ;

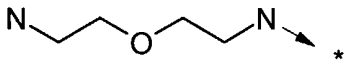
ou encore le radical N(R6)(R7) représente l'un des radicaux représentés ci-dessous :





R10 représente un radical amino(C_2-C_7)alkylamino, ((aminoalkyl)aryl)alkylamino, ((aminoalkyl)cycloalkyl)alkylamino, pipérazinyle, homopipérazinyle,

ou R10 représente le radical représenté ci-dessous :



;

R11 représente H ;

R12 représente H ou un radical alkyle, (C_3-C_7)cycloalkyle, aralkyle carbocyclique ou hétérocyclique éventuellement substitué, propargyle, allyle, hydroxyalkyle, alkylthioalkyle, arylalkylalkoxyalkyle, arylalkylthioalkoxyalkyle ;

ou un sel d'un composé de formule générale **(I)**.

2. Composé de formule générale **(I)** selon la revendication 1, caractérisé en ce que :

i) pour R1, lorsque le groupe aryle est substitué, il peut l'être de 1 à 5 fois (outre la liaison qui le relie au reste de la molécule) par des radicaux choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle, alkoxy, alkylthio, haloalkyle, haloalkoxy, aryle, aralkoxy ou SO_2NH_2, deux substituants pouvant, le cas échéant, être reliés entre eux et former un cycle, par exemple en représentant ensemble un radical méthylènedioxy ou propylène ;

ii) pour R2, lorsque le groupe aryle est substitué, il peut l'être de 1 à 5 fois (outre la liaison qui le relie au reste de la molécule) par des radicaux choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle, alkoxy, alkylthio, haloalkyle, alkényle, haloalkoxy, nitro, cyano, azido, SO_2N, mono- ou di-alkylamino,

aminoalkyle, aralkoxy ou aryle, deux substituants pouvant, le cas échéant, être reliés entre eux et former un cycle, par exemple en représentant ensemble un radical méthylènedioxy, éthylènedioxy ou propylène ;

iii) pour R3, lorsque le(s) groupe(s) aryle(s) (provenant d'un radical aryle ou aralkyle) est (sont) substitué(s), il(s) peu(ven)t l'être, selon le cas, de 1 à 5 fois (outre la liaison qui le(s) relie au reste de la molécule), les radicaux aryle ou aralkyle carbocycliques peuvent être substitués de 1 à 5 fois sur le noyau aryle par des radicaux choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle, hydroxy, alkoxy, haloalkyle, haloalkoxy, nitro, cyano, azido, mono- ou di-alkylamino, pyrrolidinyle, morpholinyle, aralkoxy ou aryle, deux substituants pouvant, la cas échéant, être reliés entre eux et former un cycle, par exemple en représentant ensemble un radical alkylènedioxy comptant de 1 à 3 atomes de carbone, tandis que les radicaux aryle ou aralkyle hétérocycliques de R3 peuvent être substitués de 1 à 2 fois sur le noyau par des radicaux choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle ;

iv) pour R4, lorsque le groupe aryle est substitué, il peut l'être de 1 à 5 fois (outre la liaison qui le relie au reste de la molécule) par des radicaux choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle ou alkoxy ;

v) pour R6, lorsque le(s) groupe(s) aryle(s) est (sont) substitué(s), il(s) peu(ven)t l'être de 1 à 5 fois (outre la liaison qui le(s) relie au reste de la molécule), les substituants éventuels sur les groupes aryle étant choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle, alkoxy, alkylthio, haloalkyle, haloalkoxy, aryle, aryloxy ou SO_2NH_2 ;

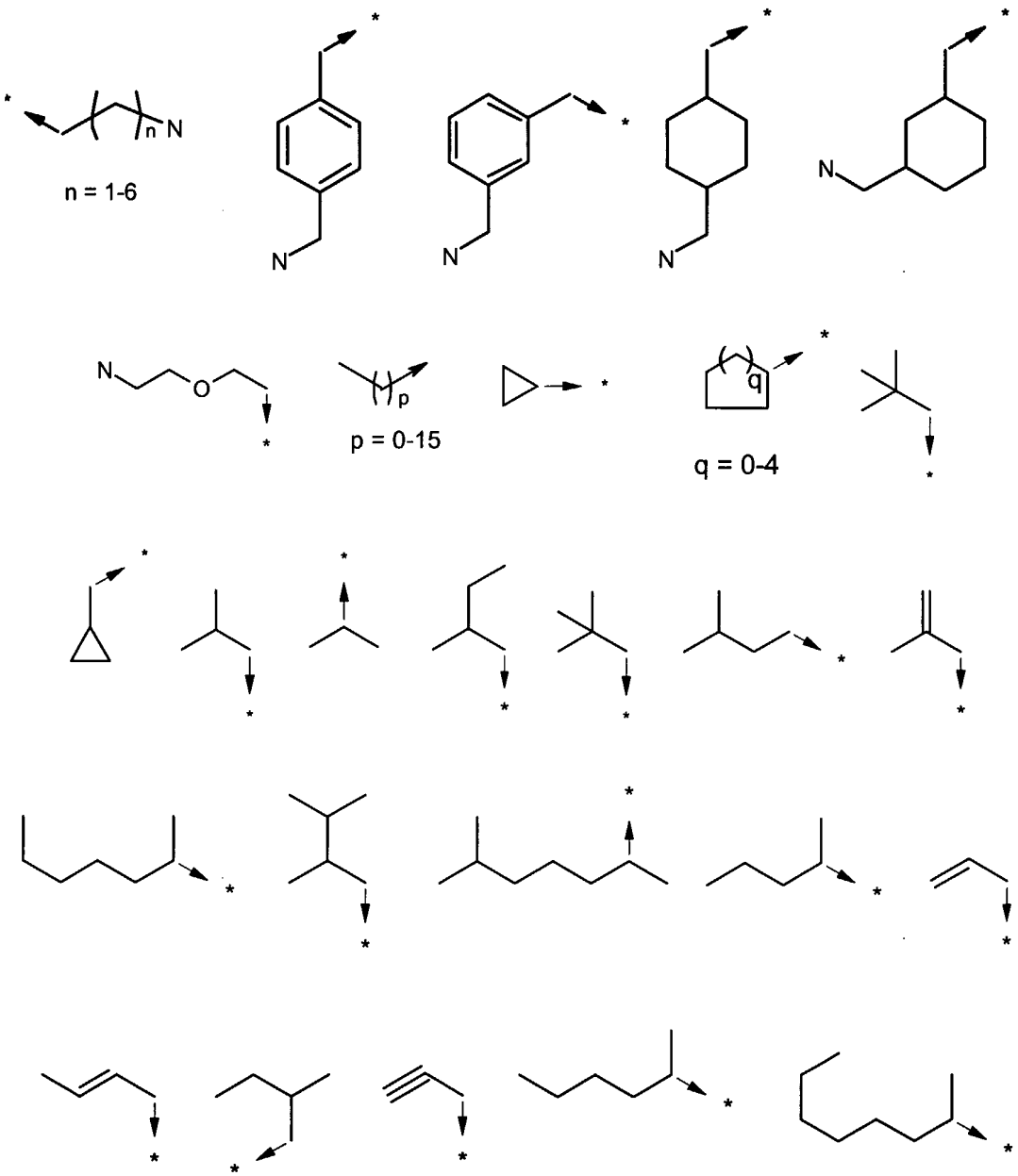
vi) pour R8, lorsque le(s) groupe(s) aryle(s) est (sont) substitué(s), il(s) peu(ven)t l'être de 1 à 5 fois (outre la liaison qui le(s) relie au reste de la molécule), les substituants éventuels sur les groupes aryle étant choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle, haloalkyle, alkoxy, hydroxy, cyano, nitro ou alkylthio ;

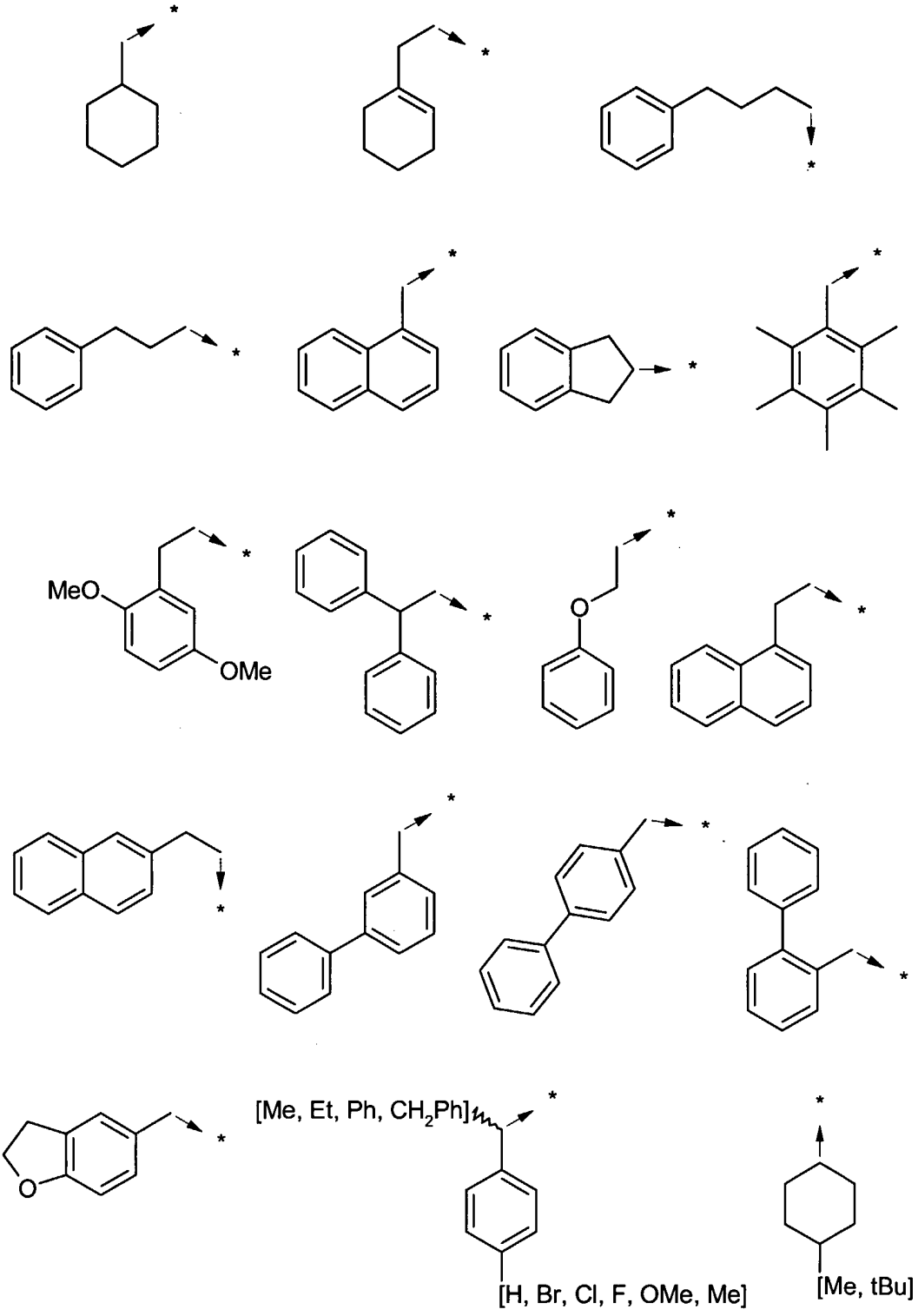
vii) pour R9, lorsque le radical aryle carbocyclique est substitué, il peut l'être de 1 à 5 fois (outre la liaison qui le relie au reste de la molécule), les substituants éventuels sur le groupe aryle étant choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle, haloalkyle, alkoxy, haloalkoxy, alkylthio, aryle carbocyclique, hydroxy, cyano ou nitro ;

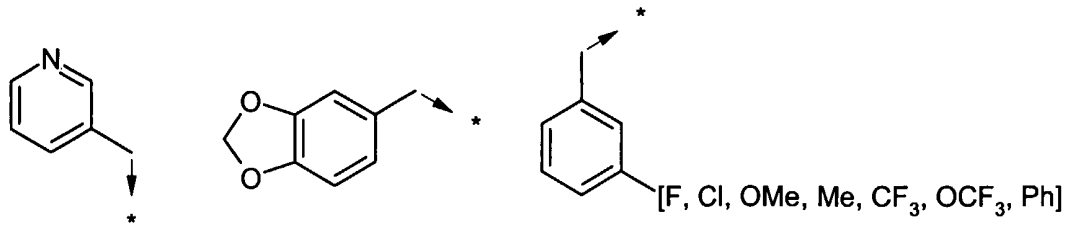
viii) pour R12, lorsque le radical aryle carbocyclique ou hétérocyclique est substitué, il peut l'être de 1 à 5 fois (outre la liaison qui le relie au reste de la molécule), les substituants éventuels sur le groupe aryle étant choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle, alkoxy, aryle carbocyclique, aralkoxy, hydroxy, cyano ou nitro.

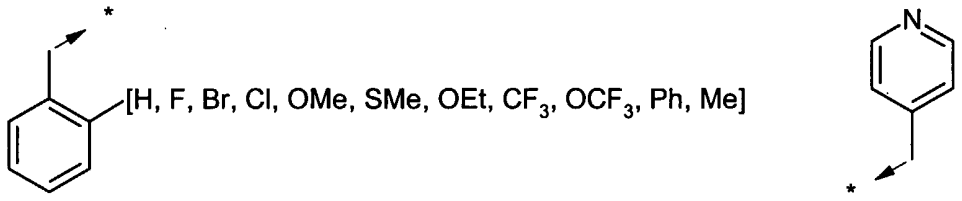
3. Composé selon la revendication 1 ou 2, caractérisé en ce que :

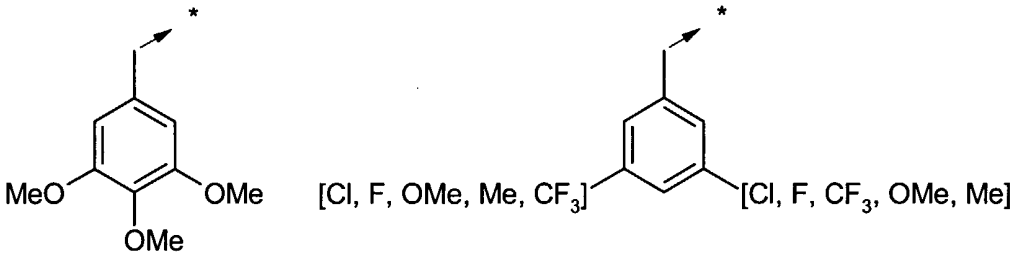
R1 représente -C(R11)(R12)-CO-R10 ou l'un des radicaux suivants :

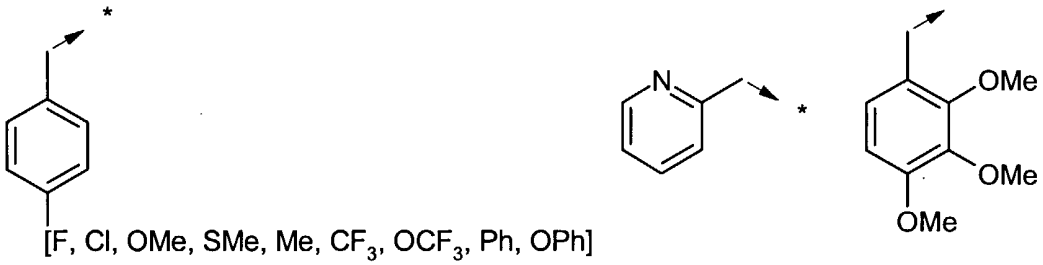


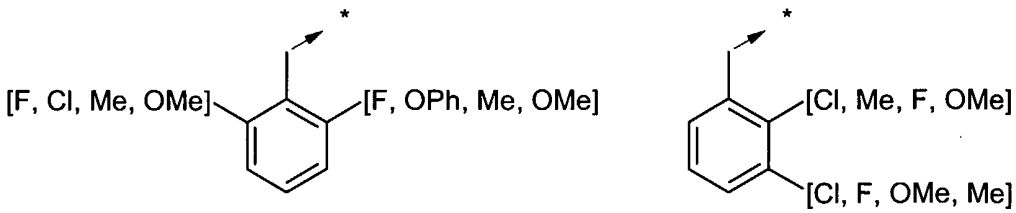

MeO
OMe
O
[Me, Et, Ph, CH2Ph]
[H, Br, Cl, F, OMe, Me]
[Me, tBu]

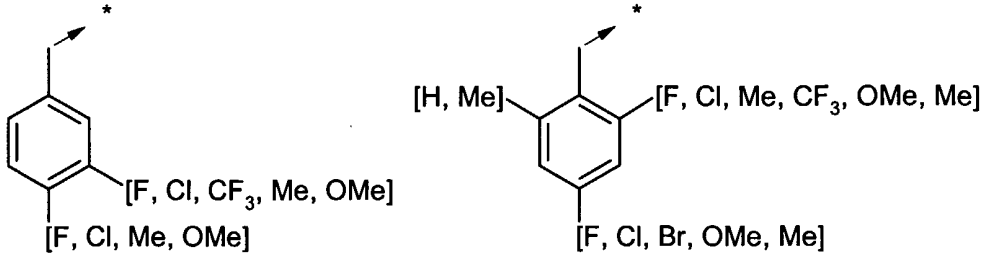

N
O
O
*
*
*
[F, Cl, OMe, Me, CF3, OCF3, Ph]

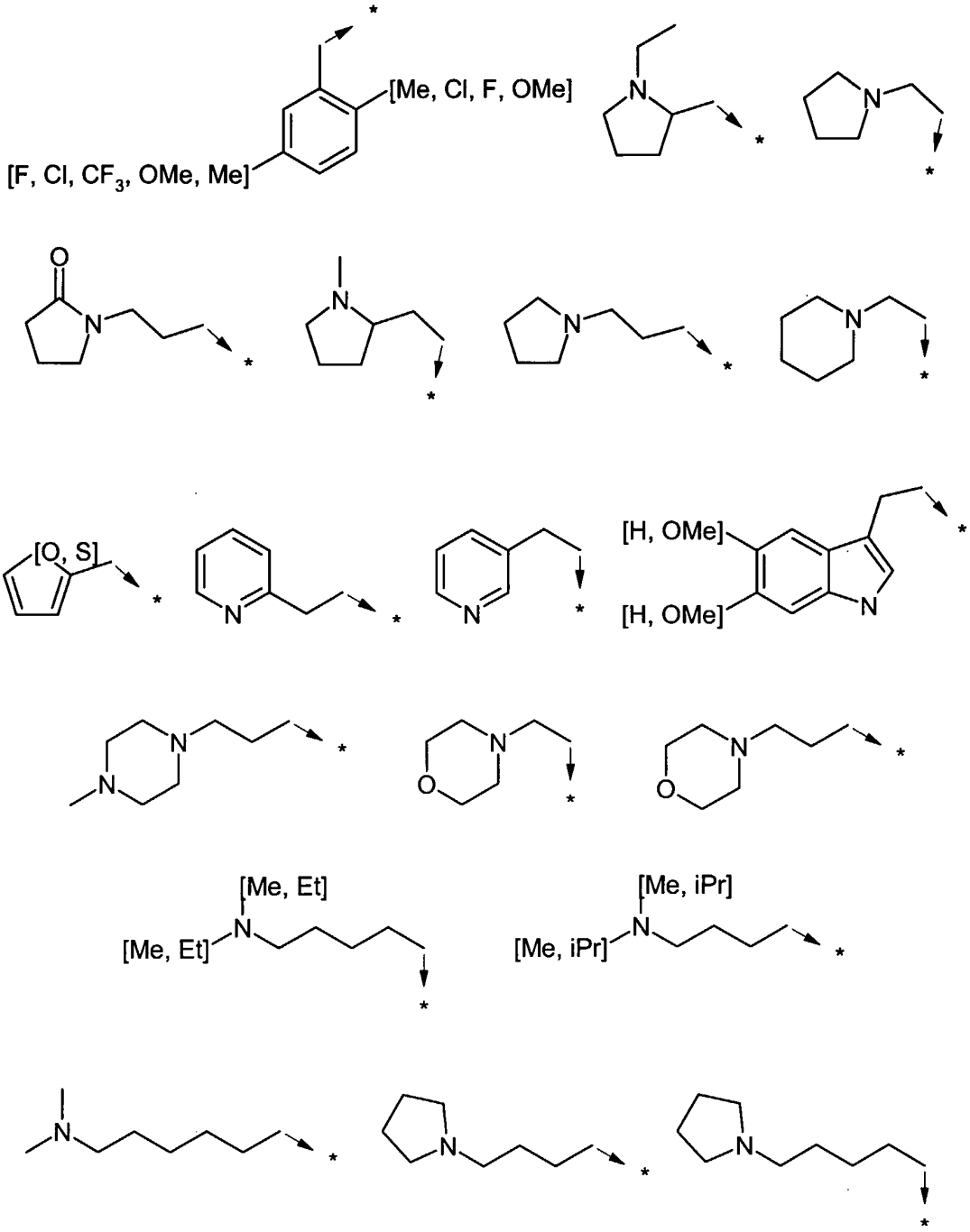

*
[H, F, Br, Cl, OMe, SMe, OEt, CF3, OCF3, Ph, Me]
N
*

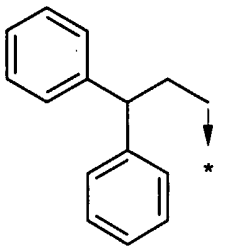

*
MeO
OMe
OMe
[Cl, F, OMe, Me, CF3]
*
[Cl, F, CF3, OMe, Me]

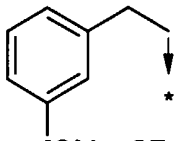

*
[F, Cl, OMe, SMe, Me, CF3, OCF3, Ph, OPh]
N
*
*
OMe
OMe
OMe


*
[F, Cl, Me, OMe]
[F, OPh, Me, OMe]
*
[Cl, Me, F, OMe]
[Cl, F, OMe, Me]

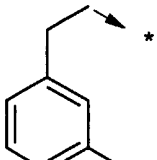

*
[F, Cl, CF3, Me, OMe]
[F, Cl, Me, OMe]
*
[H, Me]
[F, Cl, Me, CF3, OMe, Me]
[F, Cl, Br, OMe, Me]


[Me, Cl, F, OMe]
[F, Cl, CF_3, OMe, Me]
O
N
[O, S]
[H, OMe]
[H, OMe]
[Me, Et]
[Me, Et]
[Me, iPr]
[Me, iPr]



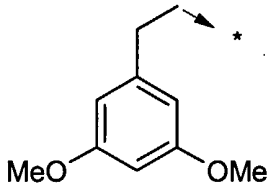


[OMe, CF_3, OEt, F, Cl, Me]

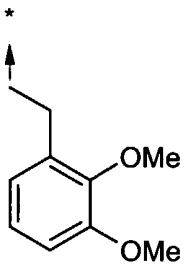


[OMe, OEt, Br, Me, Cl]

[Me, Cl]

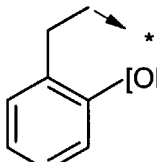


MeO OMe



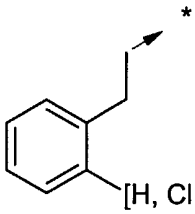
OMe

OMe

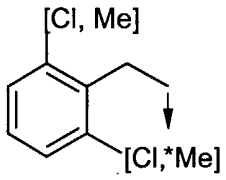


[OMe, Me, Cl]

[OMe, Me, Cl]

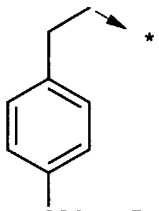


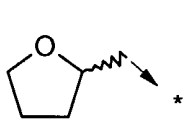
[H, Cl, OMe, OEt, Me, OPh]



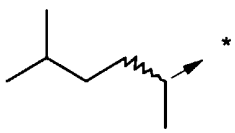
[Cl, Me]

[Cl,*Me]

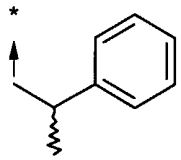


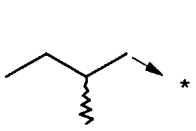


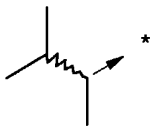


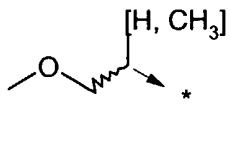


[OMe, Br, Me, SO_2NH_2, OEt, Et, OPh, F, Ph, Br, Cl]

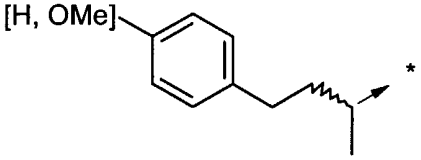




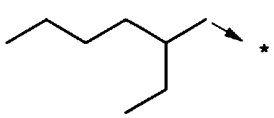


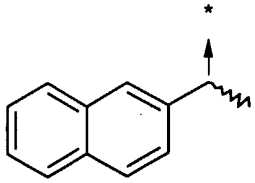


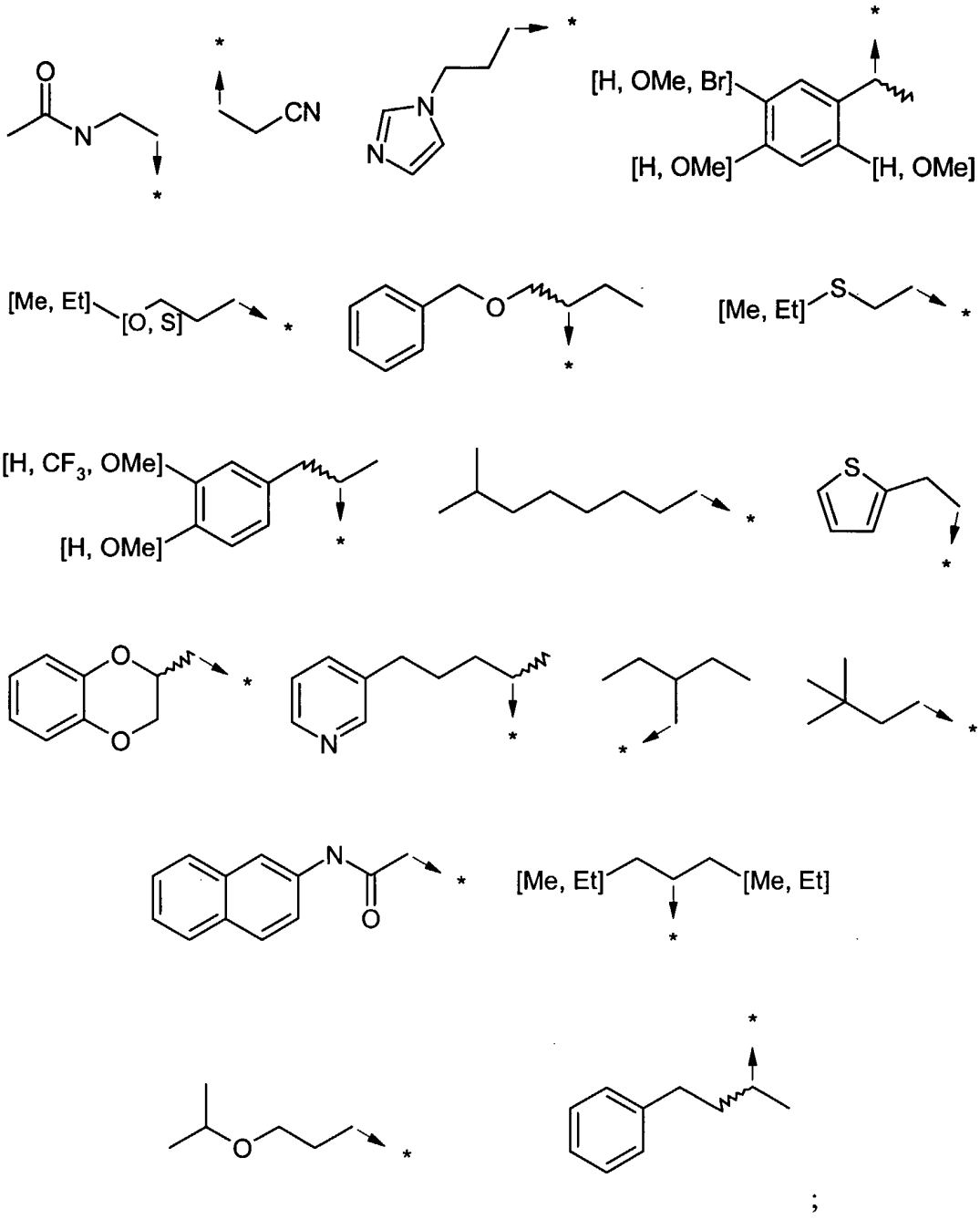
[H, CH_3]



[H, OMe]

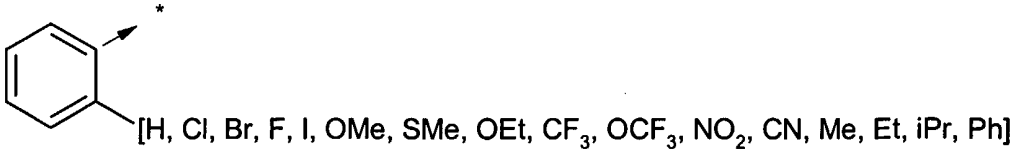


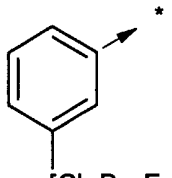




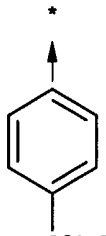
;

R2 représente l'un des radicaux suivants :

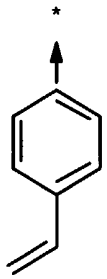




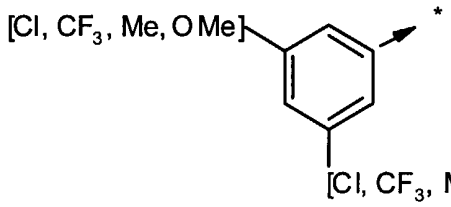
[Cl, Br, F, I, OMe, SMe, CF_3, OCF_3, NO_2, CN, Me, Et, iPr, OCH_2Ph]



[Cl, Br, F, I, OMe, OEt, CF_3, OCF_3, NO_2, CN, Me, Et, iPr, nBu, tBu, NMe_2, NEt_2]

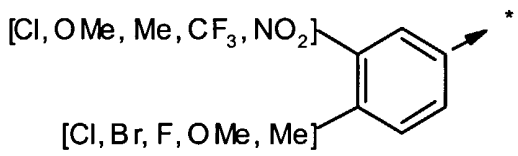






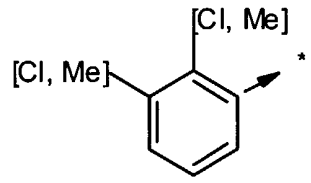
[Cl, CF_3, Me, OMe]

[Cl, CF_3, Me, OMe]



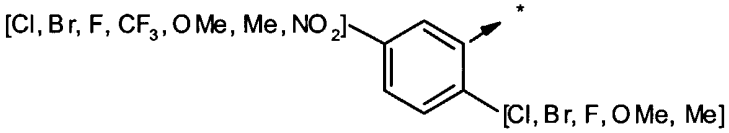
[Cl, OMe, Me, CF_3, NO_2]

[Cl, Br, F, OMe, Me]



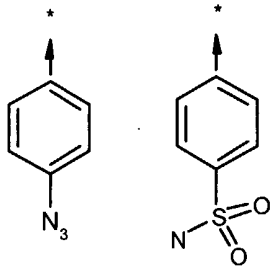
[Cl, Me]

[Cl, Me]

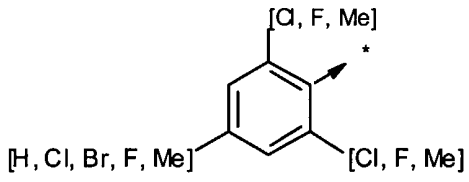


[Cl, Br, F, CF_3, OMe, Me, NO_2]

[Cl, Br, F, OMe, Me]



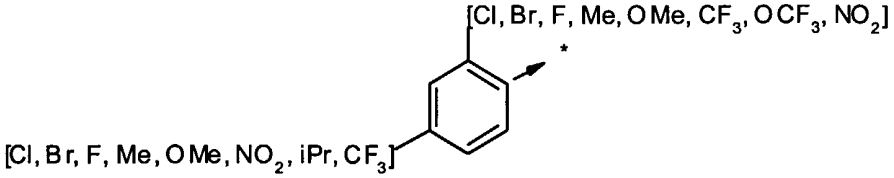
N_3



[Cl, F, Me]

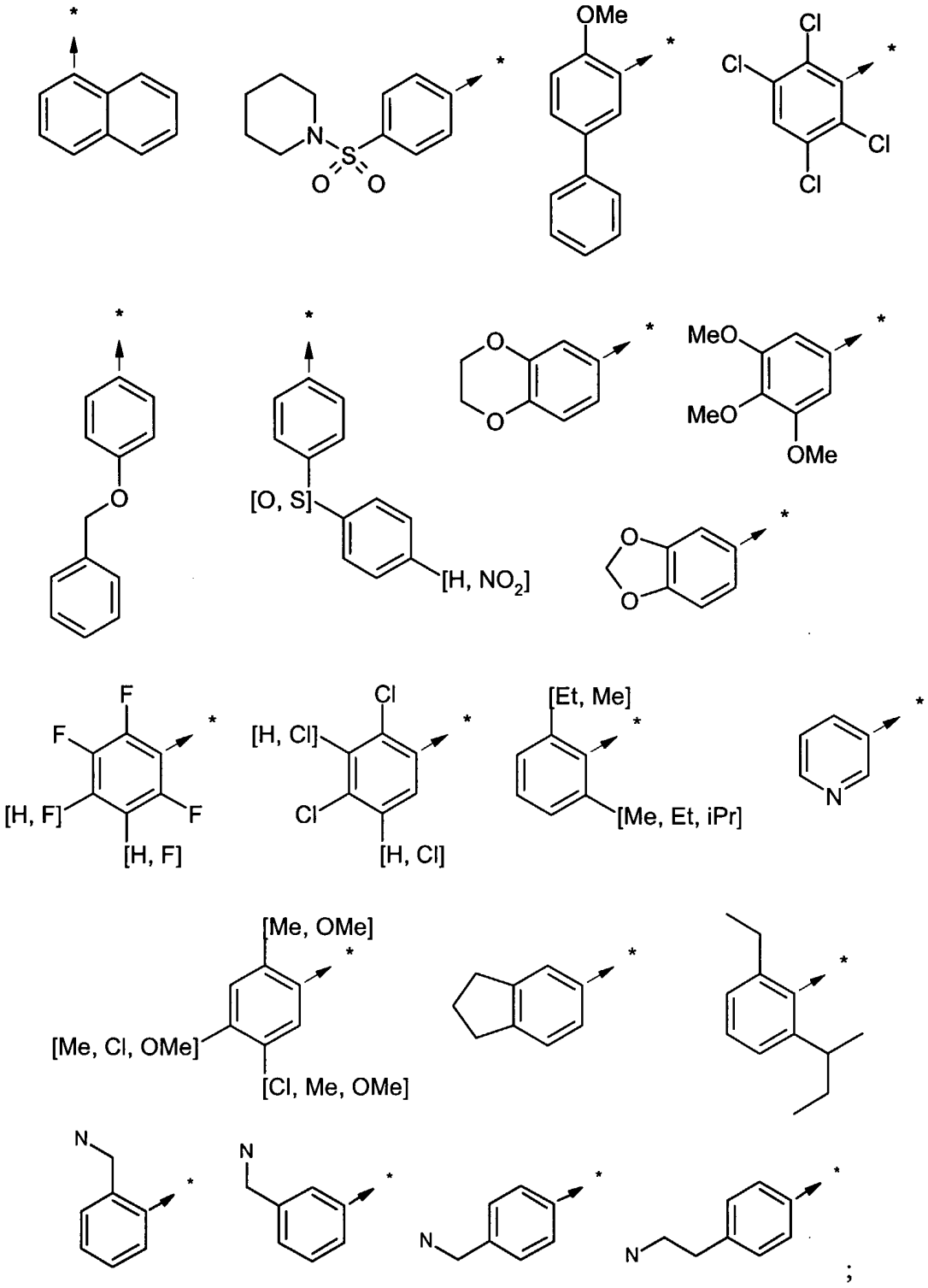
[H, Cl, Br, F, Me]

[Cl, F, Me]



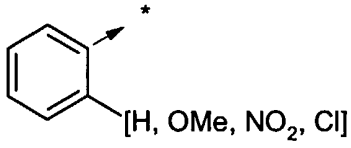
[Cl, Br, F, Me, OMe, CF_3, OCF_3, NO_2]

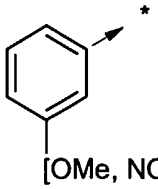
[Cl, Br, F, Me, OMe, NO_2, iPr, CF_3]

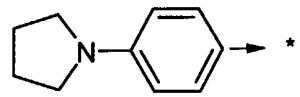


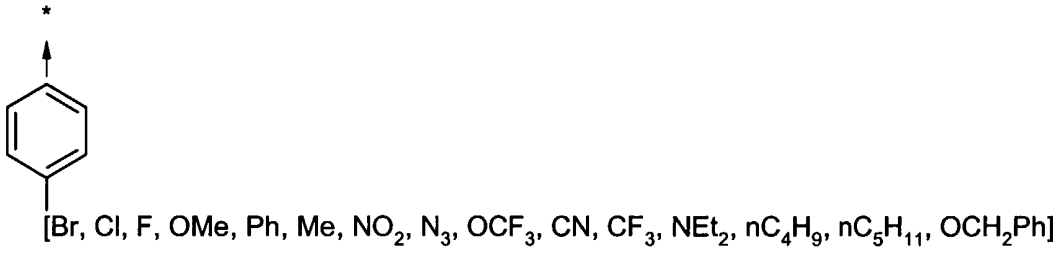
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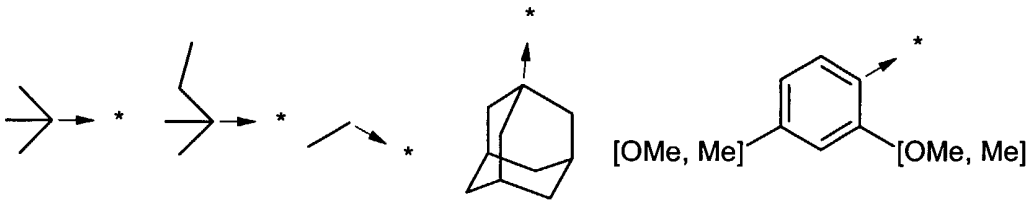
R3 représente CO-R5 ou l'un des radicaux suivants :

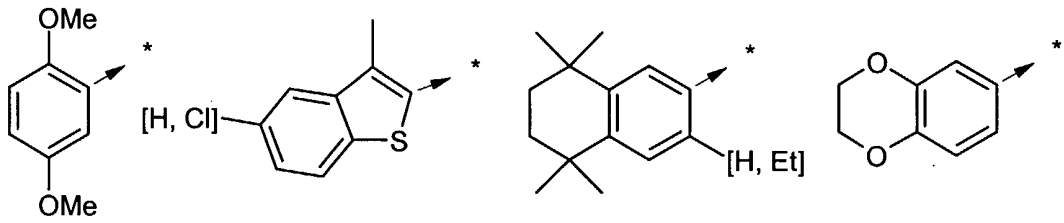

[H, OMe, NO2, Cl]

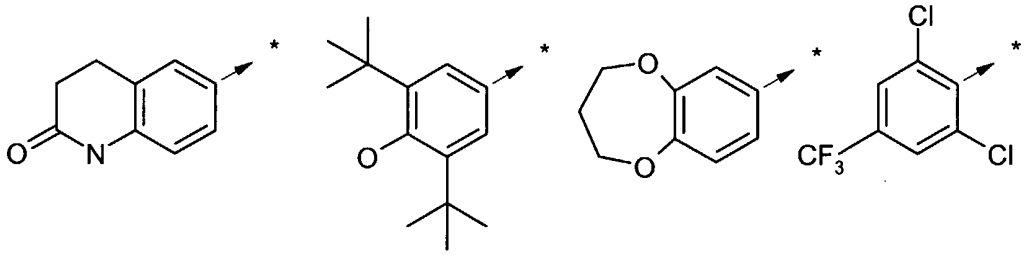

[OMe, NO2, Br, F, Cl, CN]

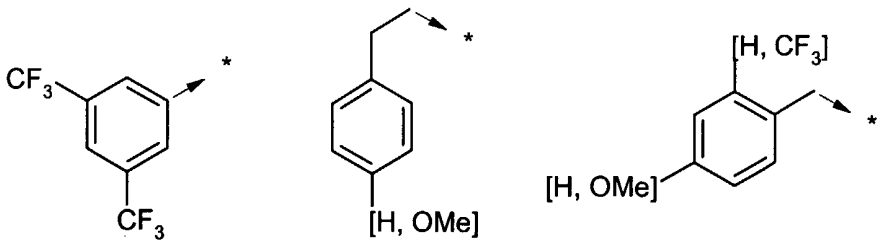


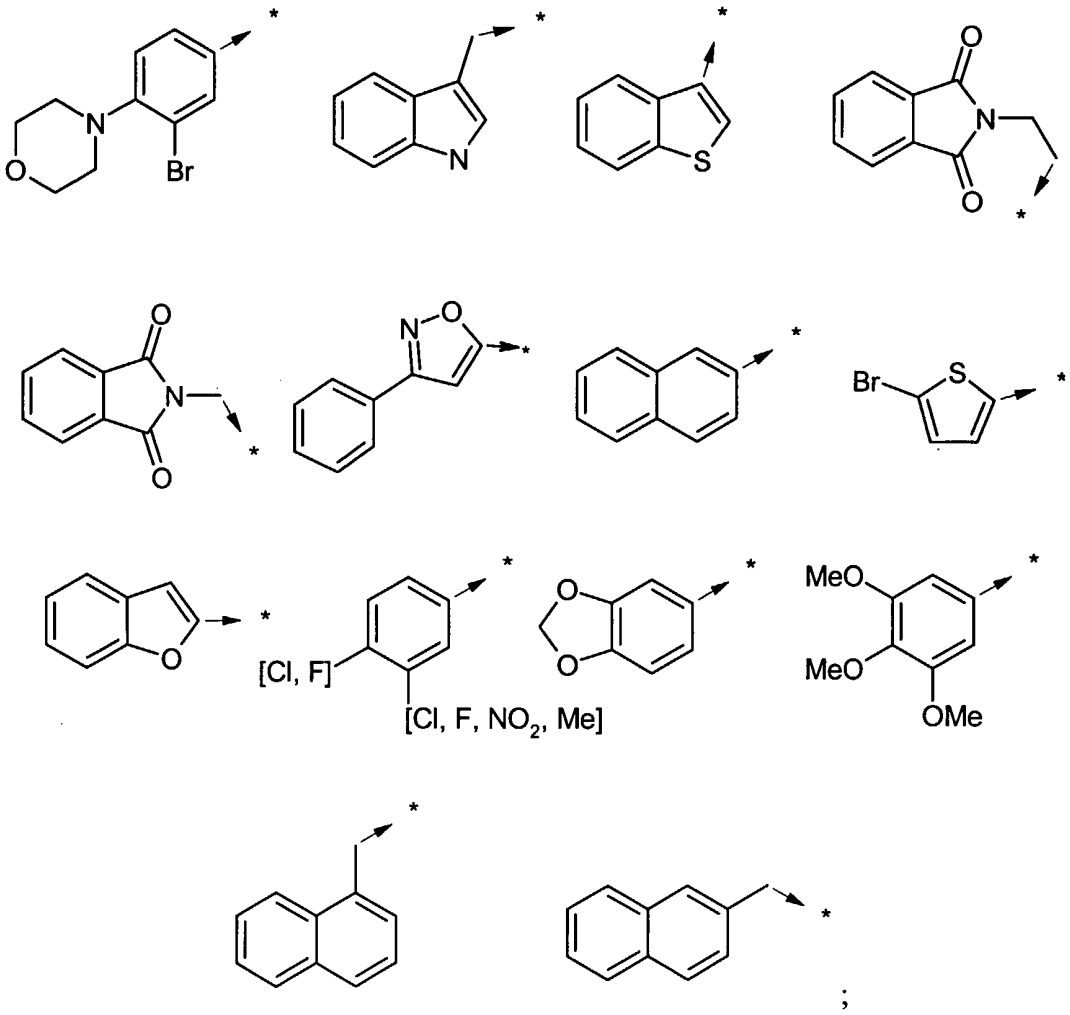

[Br, Cl, F, OMe, Ph, Me, NO2, N3, OCF3, CN, CF3, NEt2, nC4H9, nC5H11, OCH2Ph]


[OMe, Me]
[OMe, Me]


OMe
OMe
[H, Cl]
S
[H, Et]
O
O

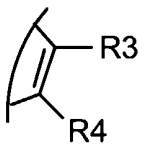
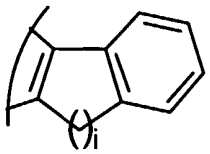

O
N
O
O
O
Cl
CF3
Cl


CF3
CF3
[H, OMe]
[H, CF3]
[H, OMe]



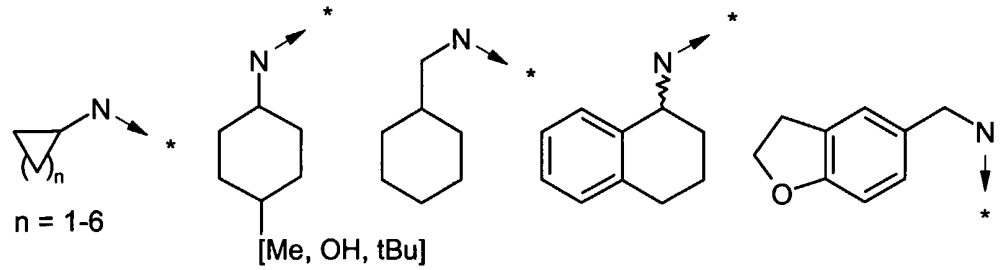
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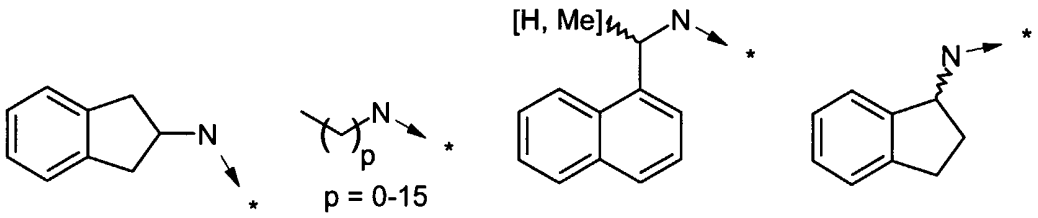
R4 représente H, alkyle, aralkyle carbocyclique ou hétérocyclique éventuellement substitué sur le radical aryle ;

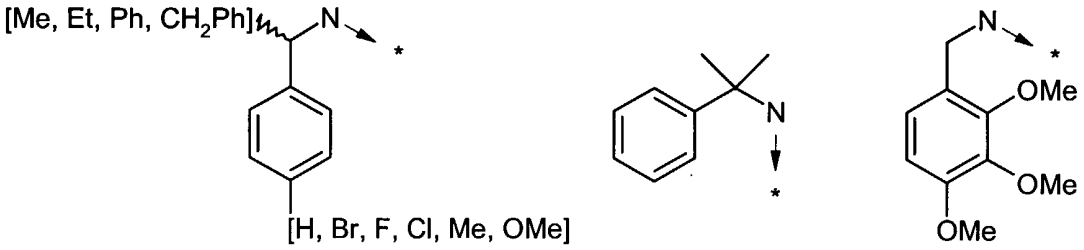
ou alors le radical  représente un radical de formule générale 

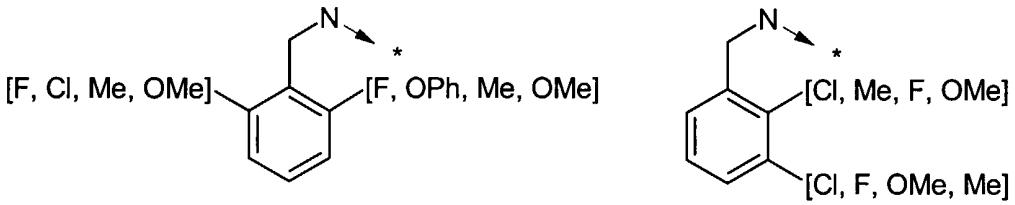
dans laquelle i représente un entier de 1 à 3 ;

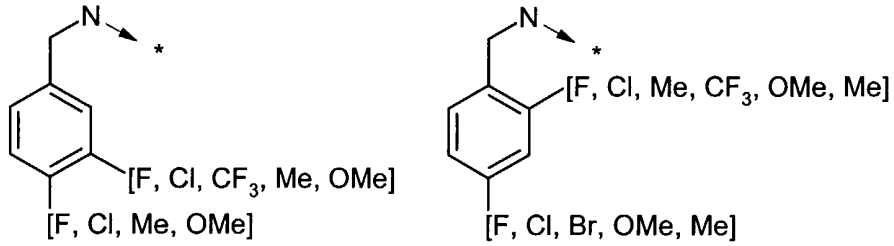
R5 représente l'un des radicaux suivants :

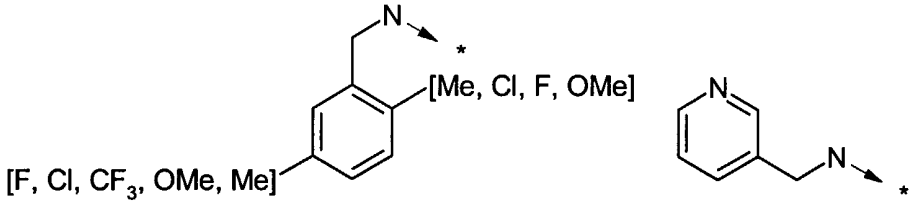

n = 1-6
[Me, OH, tBu]

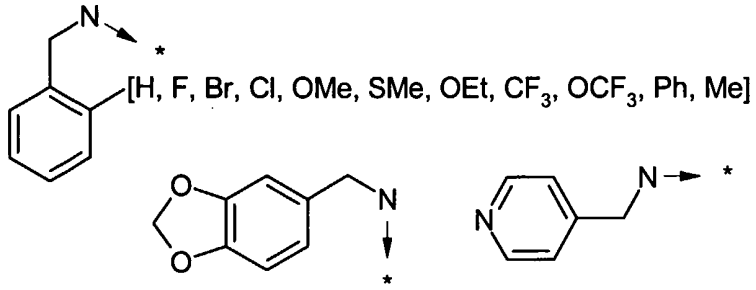

[H, Me]
p = 0-15

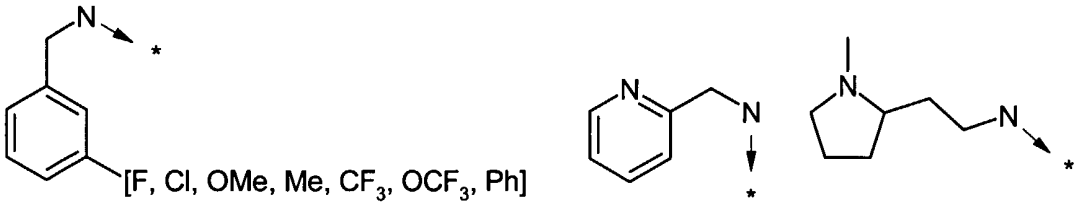

[Me, Et, Ph, CH2Ph]
[H, Br, F, Cl, Me, OMe]
OMe
OMe
OMe

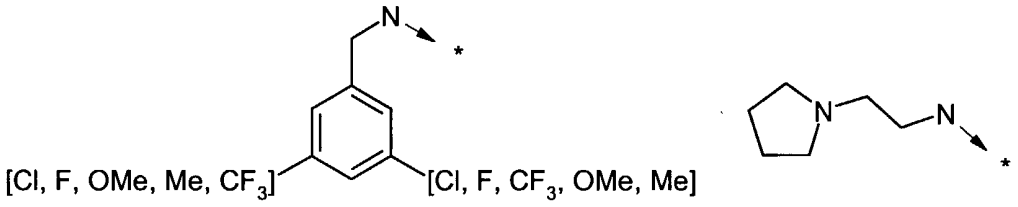

[F, Cl, Me, OMe]
[F, OPh, Me, OMe]
[Cl, Me, F, OMe]
[Cl, F, OMe, Me]

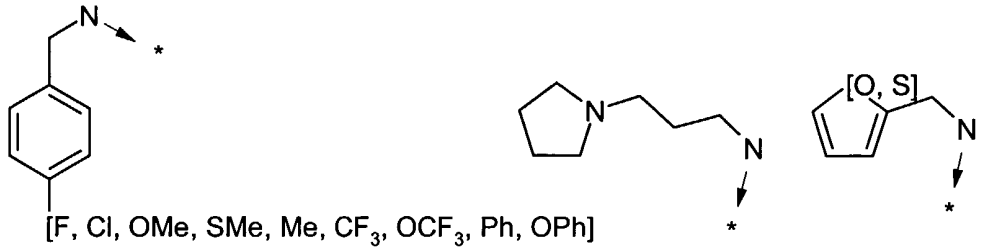

[F, Cl, CF3, Me, OMe]
[F, Cl, Me, OMe]
[F, Cl, Me, CF3, OMe, Me]
[F, Cl, Br, OMe, Me]

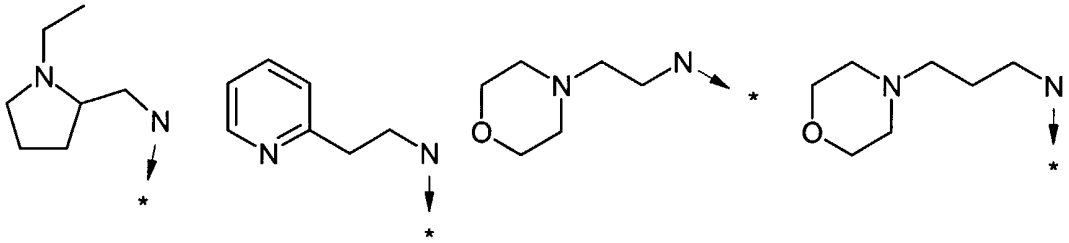

[Me, Cl, F, OMe]
[F, Cl, CF3, OMe, Me]

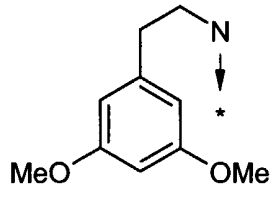

[H, F, Br, Cl, OMe, SMe, OEt, CF_3, OCF_3, Ph, Me]
MeO
OMe
OMe

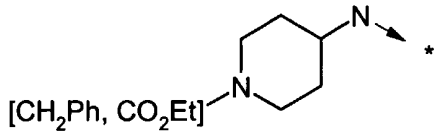

[F, Cl, OMe, Me, CF_3, OCF_3, Ph]

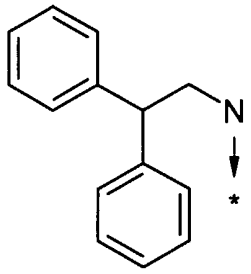

[Cl, F, OMe, Me, CF_3]
[Cl, F, CF_3, OMe, Me]

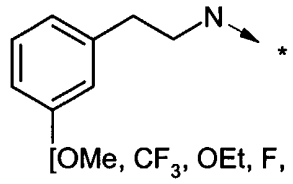

[F, Cl, OMe, SMe, Me, CF_3, OCF_3, Ph, OPh]
[O, S]

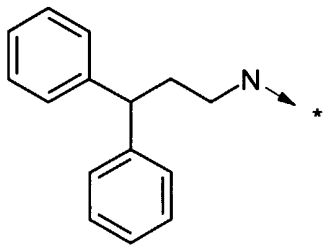


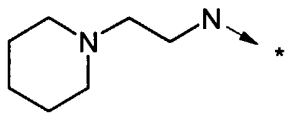


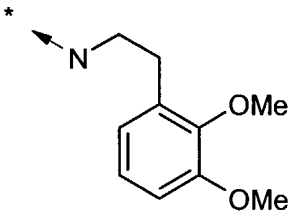


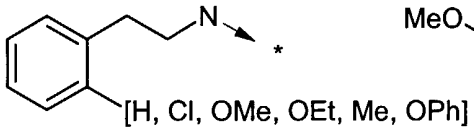


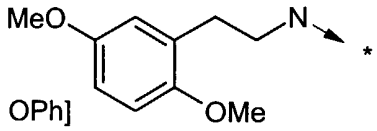


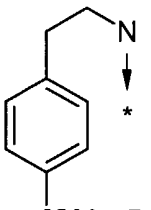


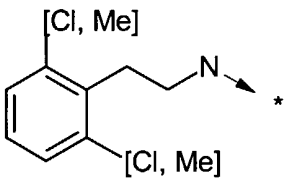


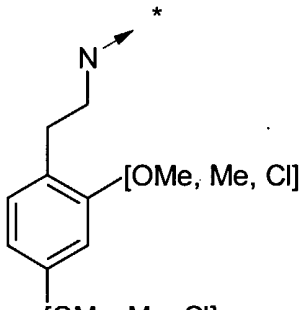






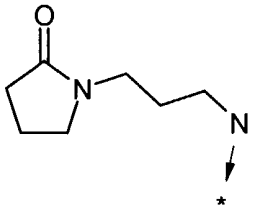


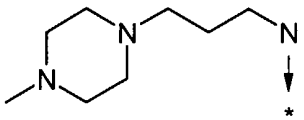


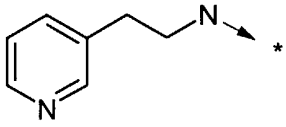


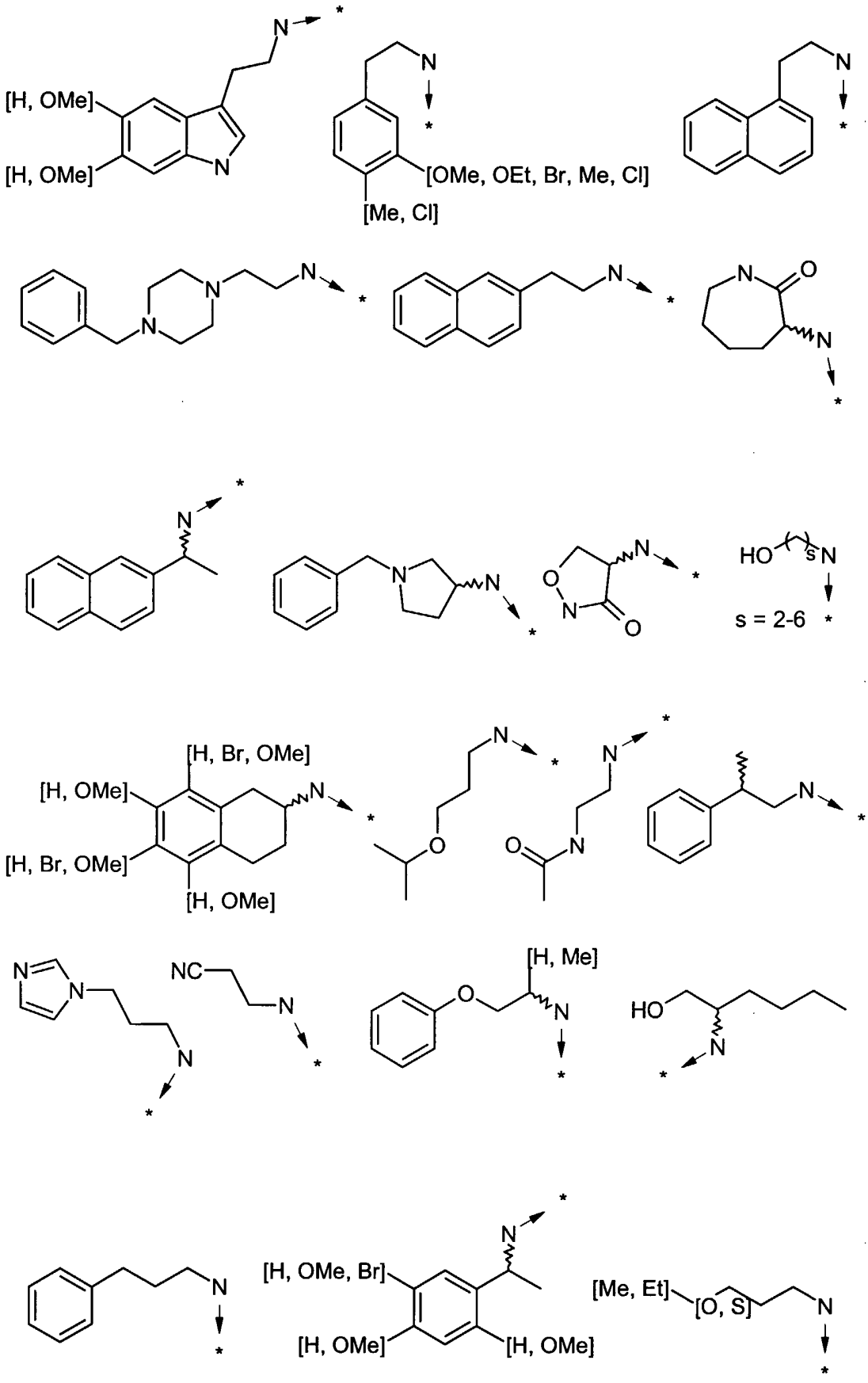
[OMe, Br, Me, SO_2NH_2, OEt, Et, OPh, F, Ph, Br, Cl]

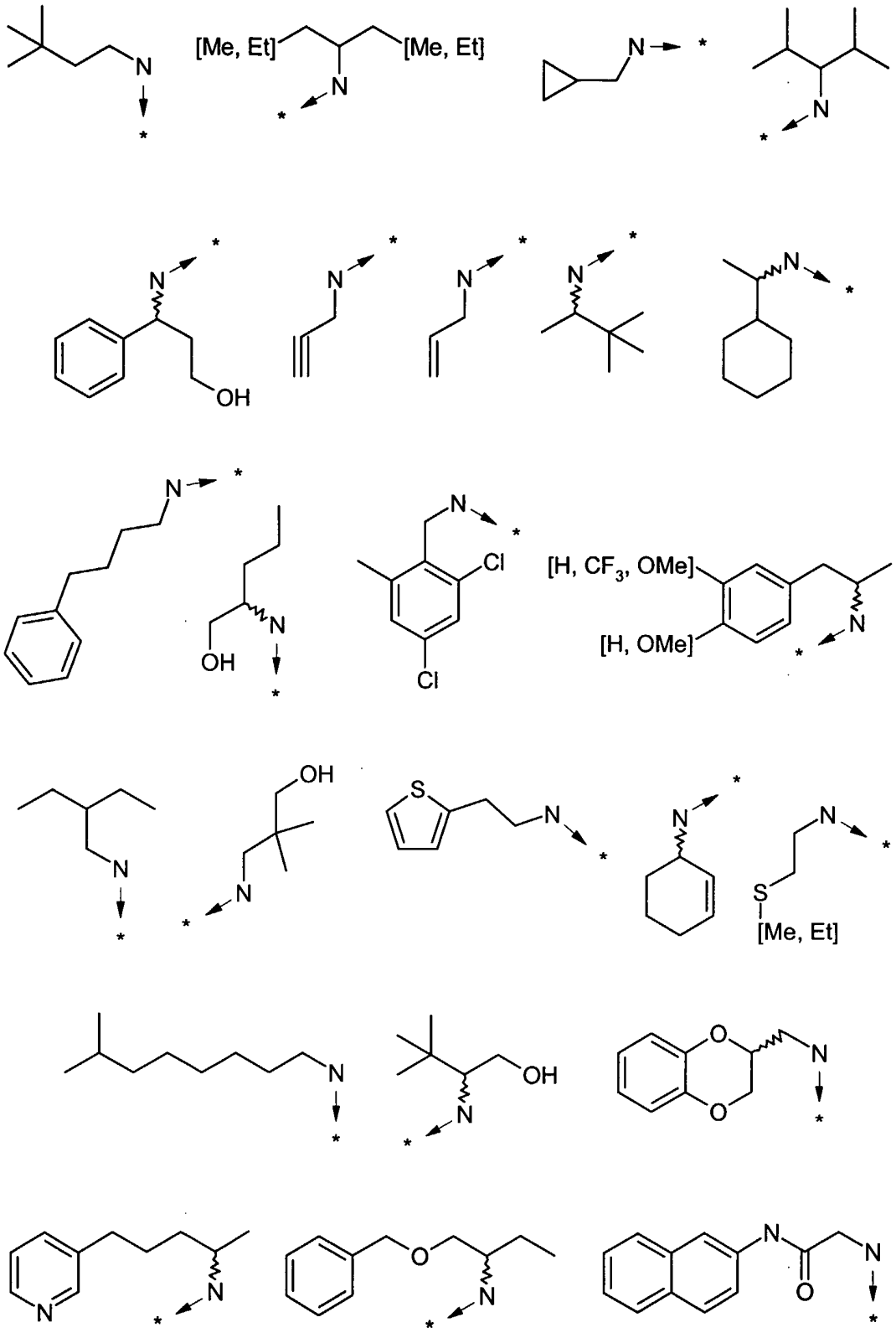
[OMe, Me, Cl]

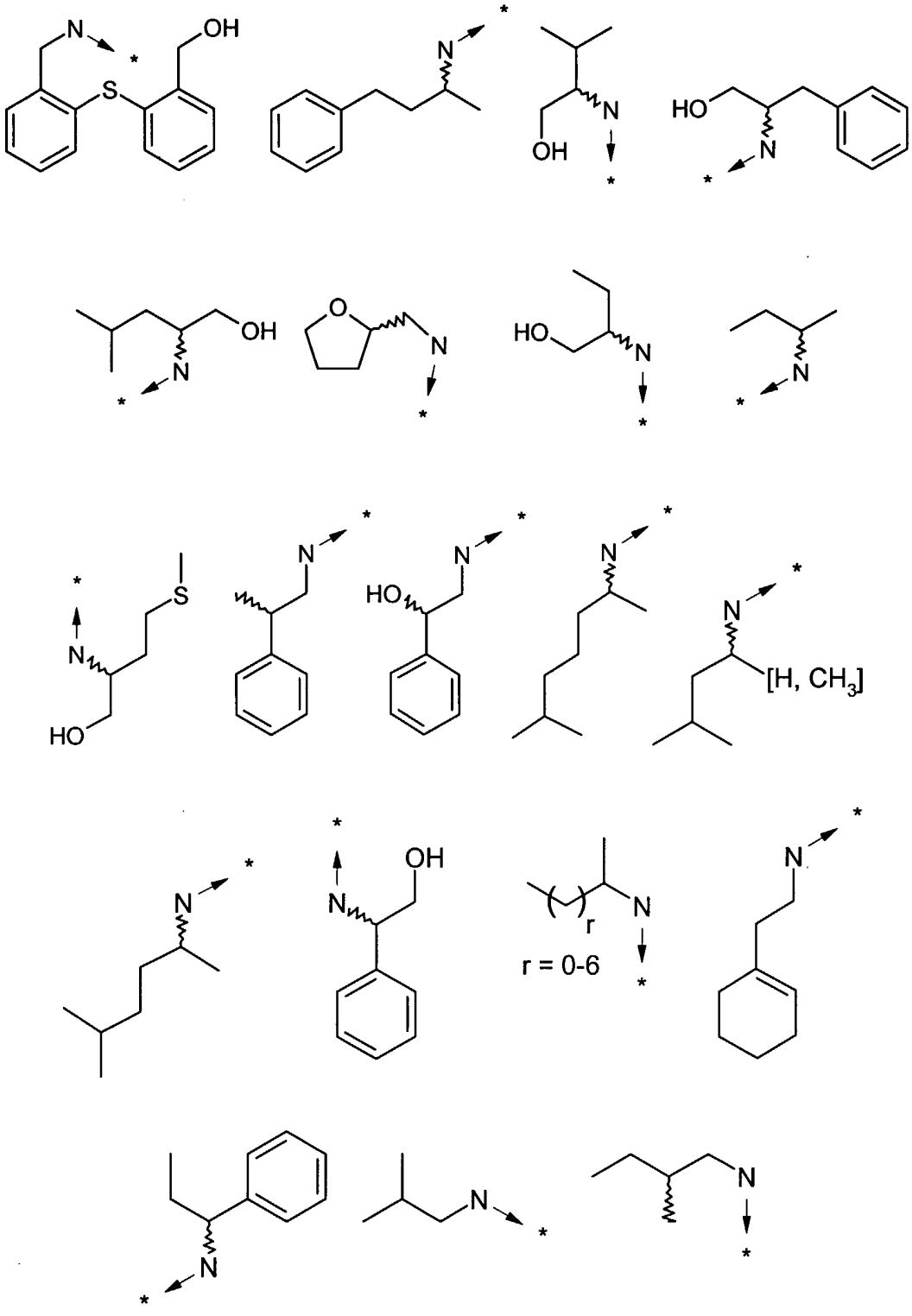


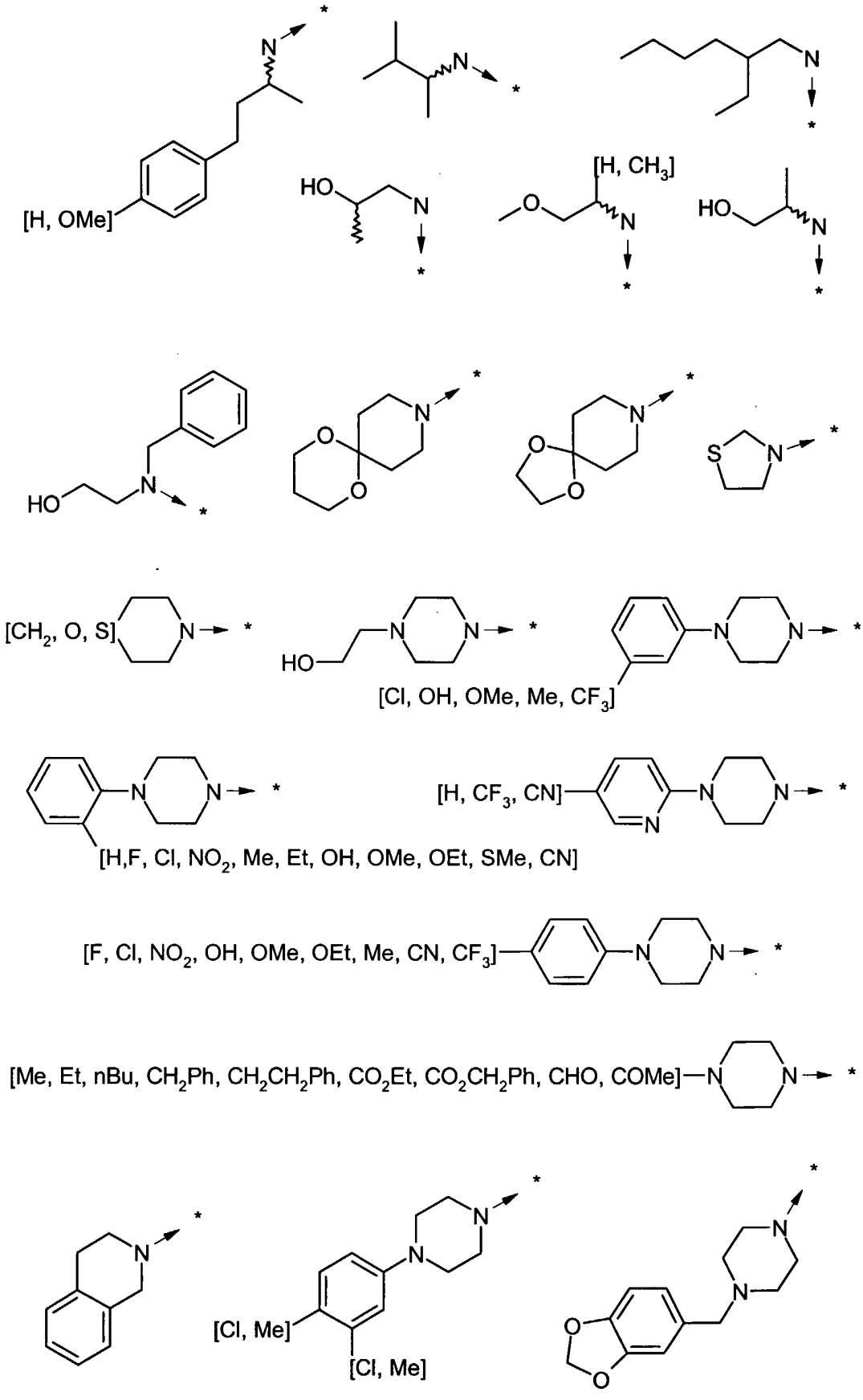


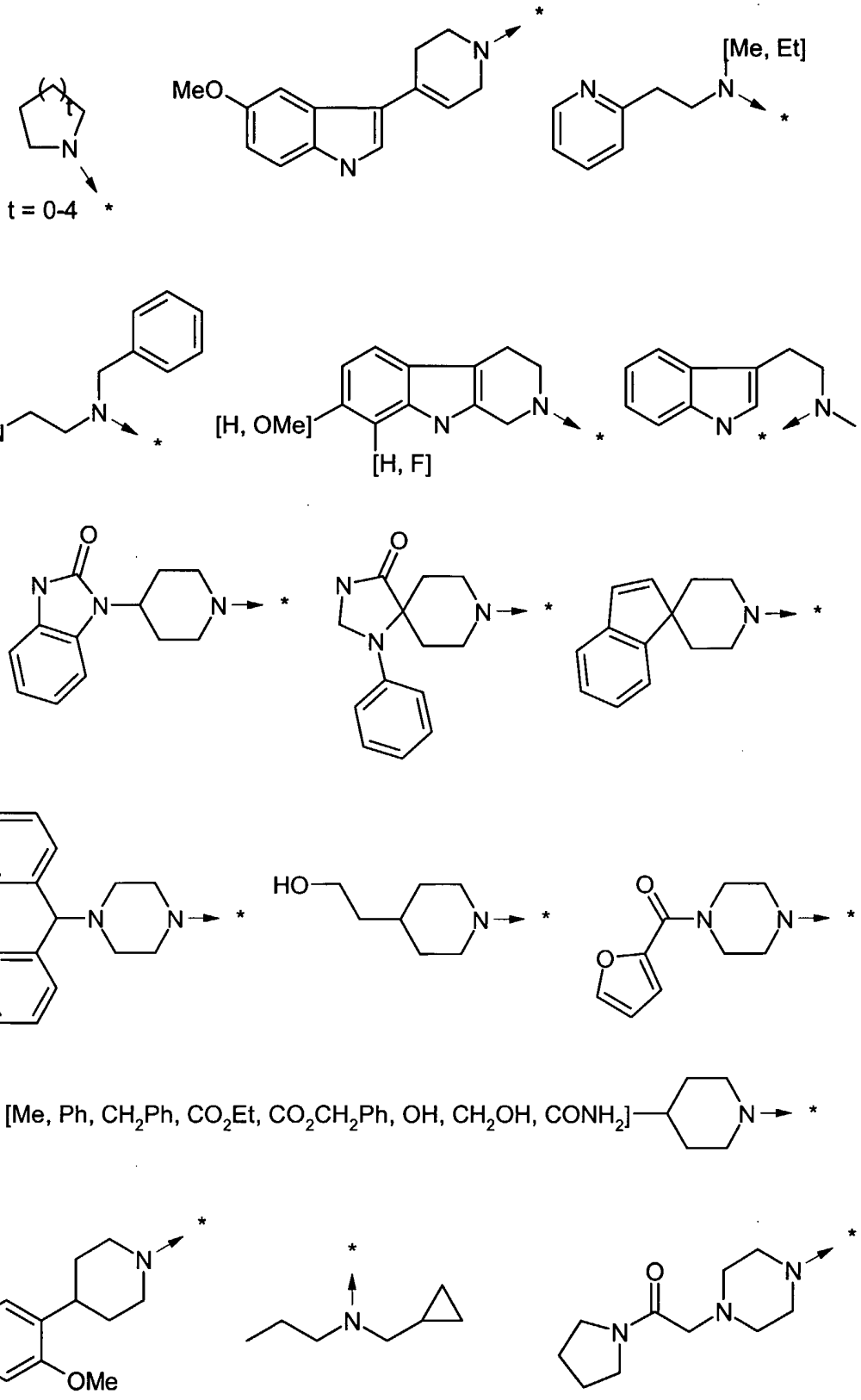


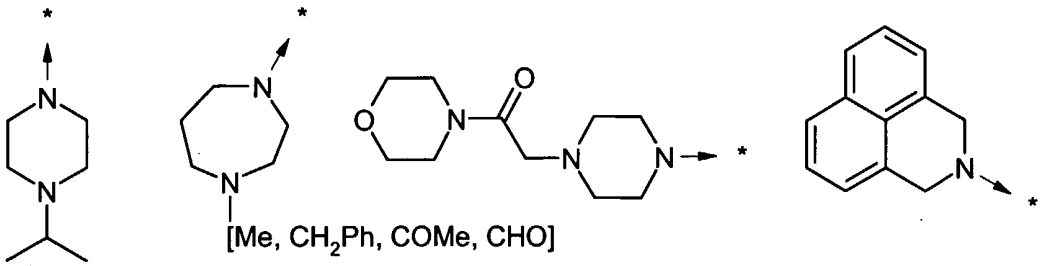

[H, OMe]
[H, OMe]
[OMe, OEt, Br, Me, Cl]
[Me, Cl]
HO
s = 2-6
[H, Br, OMe]
[H, OMe]
[H, Br, OMe]
[H, OMe]
NC
[H, Me]
HO
[H, OMe, Br]
[H, OMe]
[H, OMe]
[Me, Et]
[O, S]

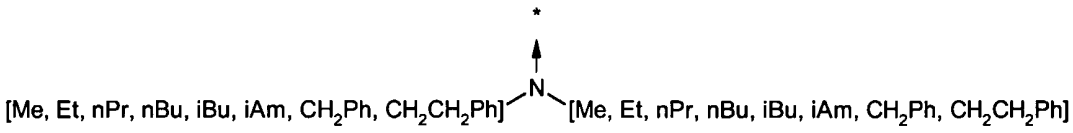

[Me, Et]
[Me, Et]
OH
OH
Cl
Cl
[H, CF3, OMe]
[H, OMe]
S
[Me, Et]
O
O

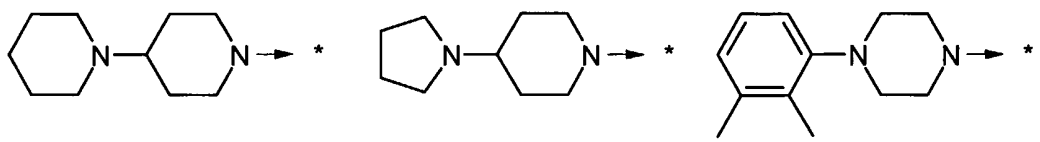

r = 0-6
[H, CH3]

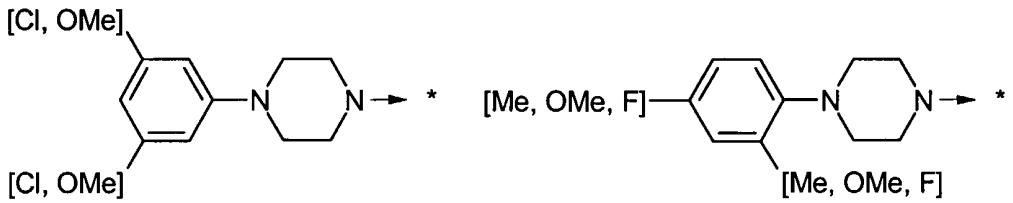

[H, OMe]
HO
[H, CH3]
HO
HO
[CH2, O, S]
HO
[Cl, OH, OMe, Me, CF3]
[H, CF3, CN]
[H,F, Cl, NO2, Me, Et, OH, OMe, OEt, SMe, CN]
[F, Cl, NO2, OH, OMe, OEt, Me, CN, CF3]
[Me, Et, nBu, CH2Ph, CH2CH2Ph, CO2Et, CO2CH2Ph, CHO, COMe]
[Cl, Me]
[Cl, Me]

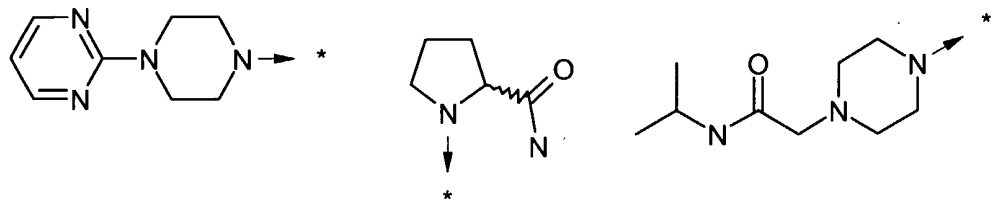

t = 0-4
MeO
[Me, Et]
[H, OMe]
[H, F]
[Me, Ph, CH2Ph, CO2Et, CO2CH2Ph, OH, CH2OH, CONH2]
OMe

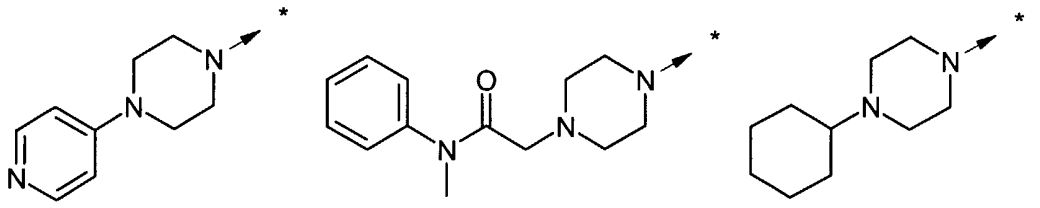

[Me, CH2Ph, COMe, CHO]

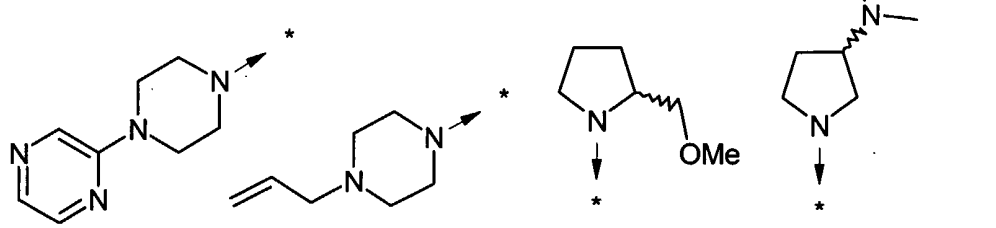

[Me, Et, nPr, nBu, iBu, iAm, CH2Ph, CH2CH2Ph]
[Me, Et, nPr, nBu, iBu, iAm, CH2Ph, CH2CH2Ph]

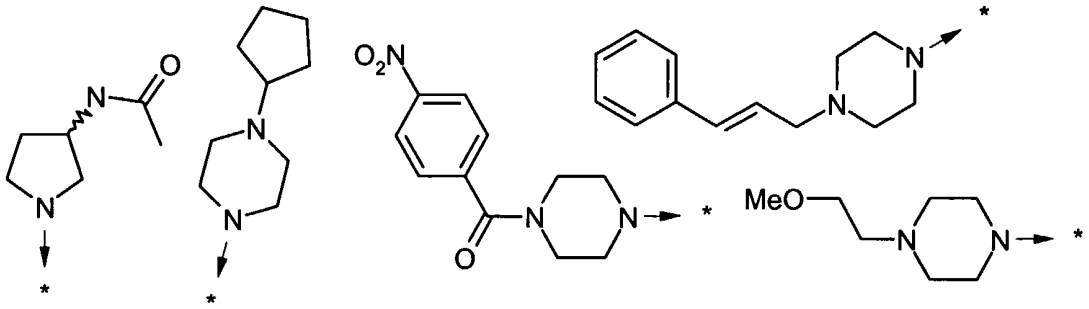


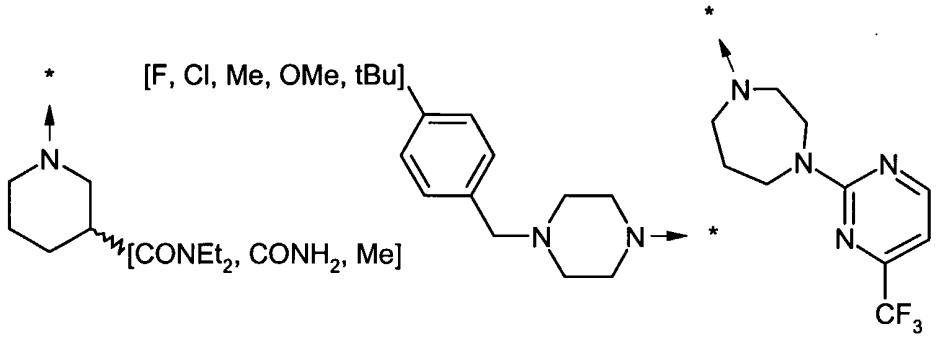

[Cl, OMe]
[Cl, OMe]
[Me, OMe, F]
[Me, OMe, F]

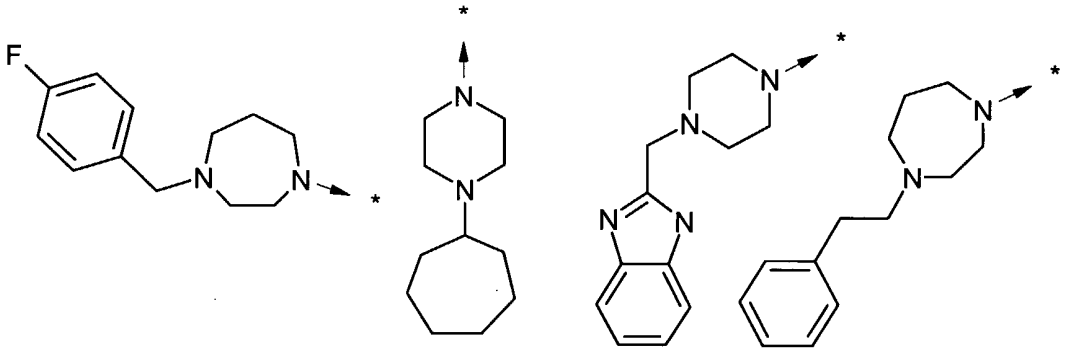


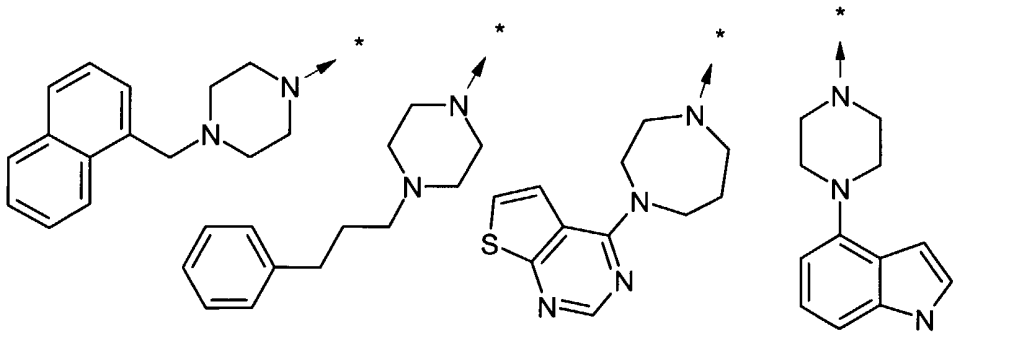


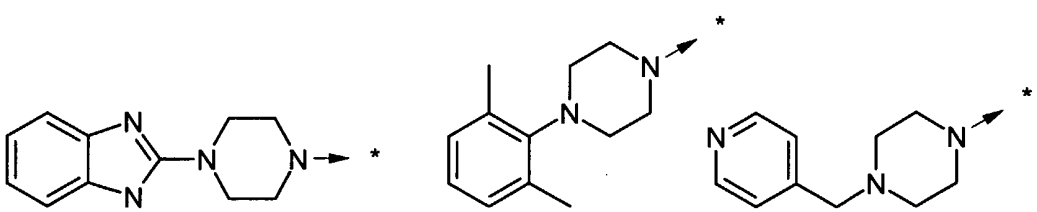

OMe

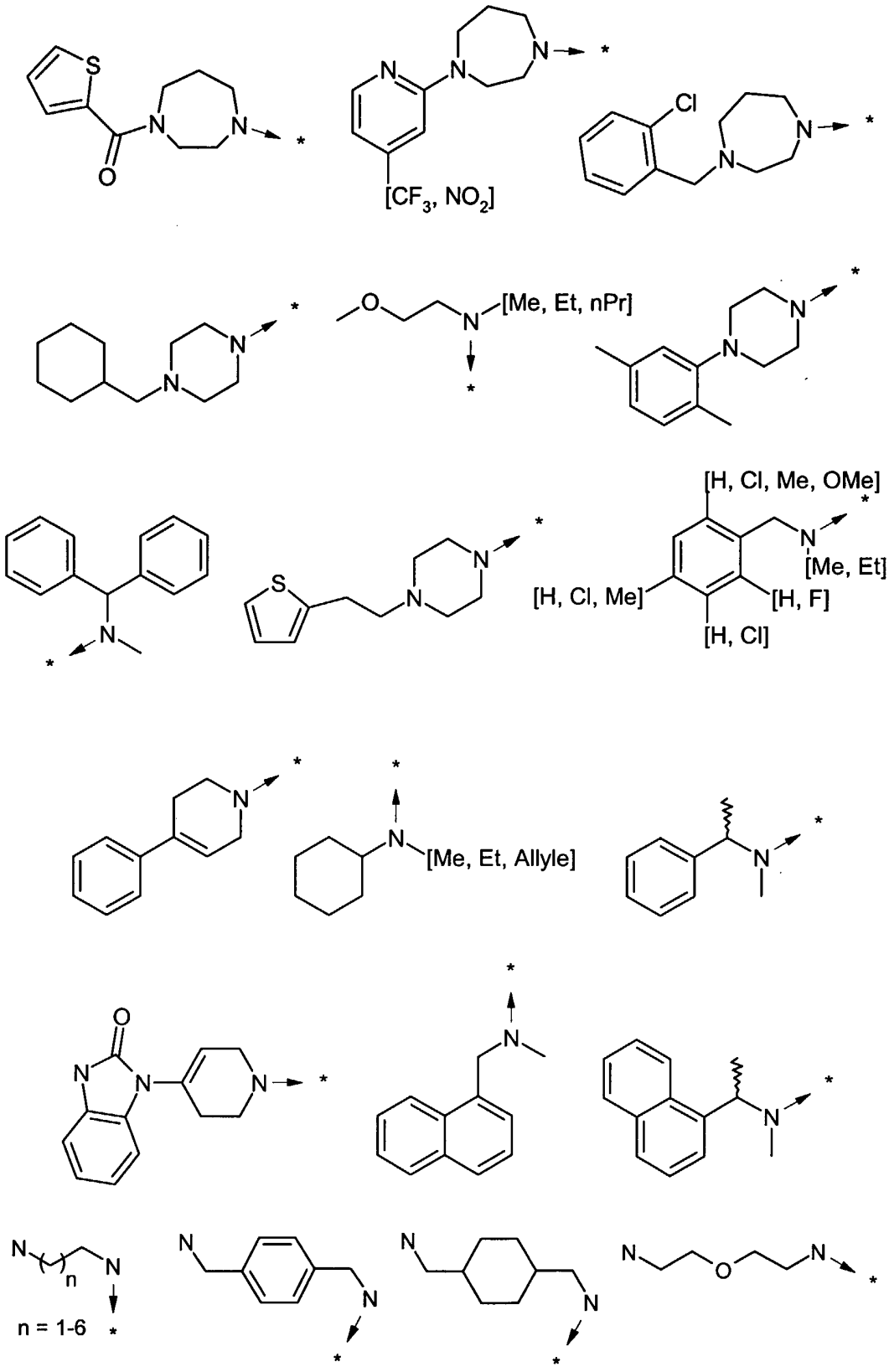


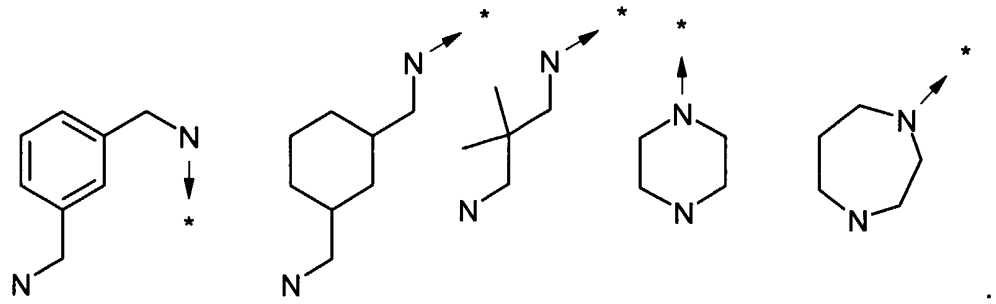

[F, Cl, Me, OMe, tBu]
[CONEt2, CONH2, Me]





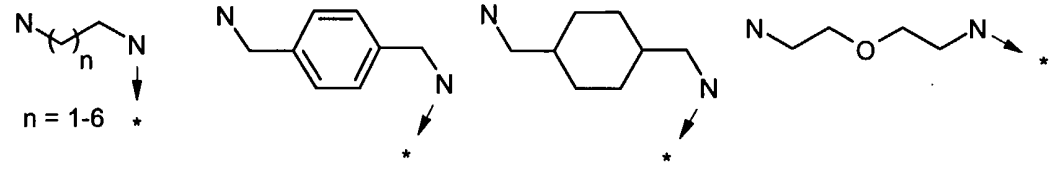


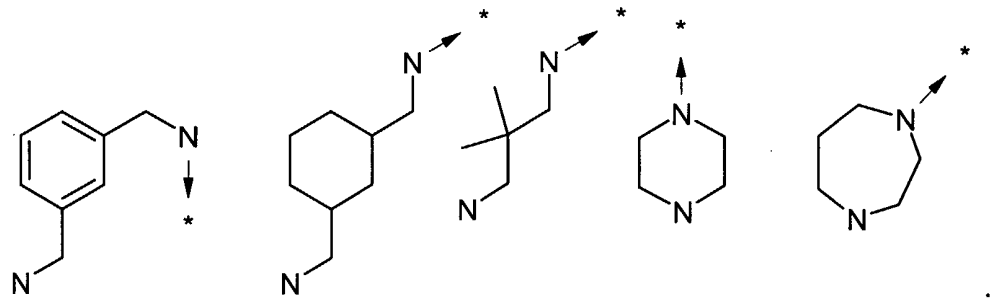

[CF3, NO2]
[Me, Et, nPr]
[H, Cl, Me, OMe]
[Me, Et]
[H, Cl, Me]
[H, F]
[H, Cl]
[Me, Et, Allyle]
n = 1-6



;

R10 représente l'un des radicaux suivants :

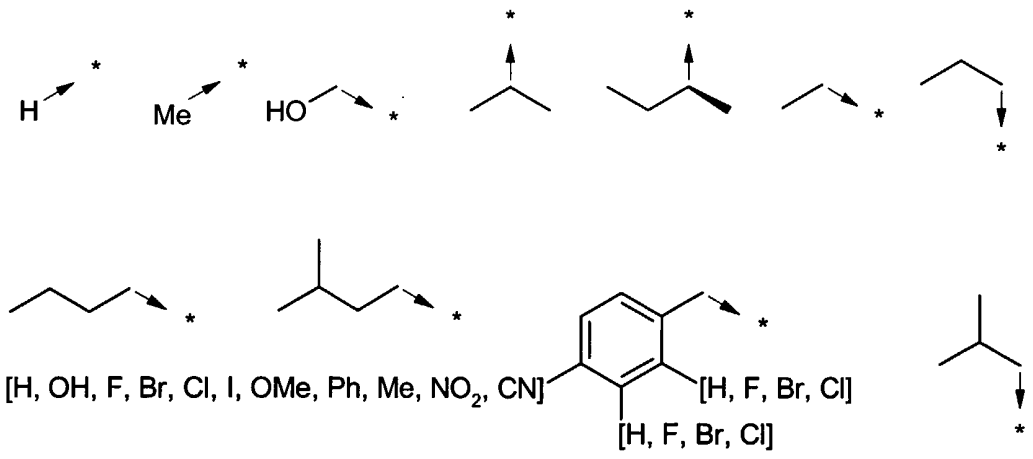


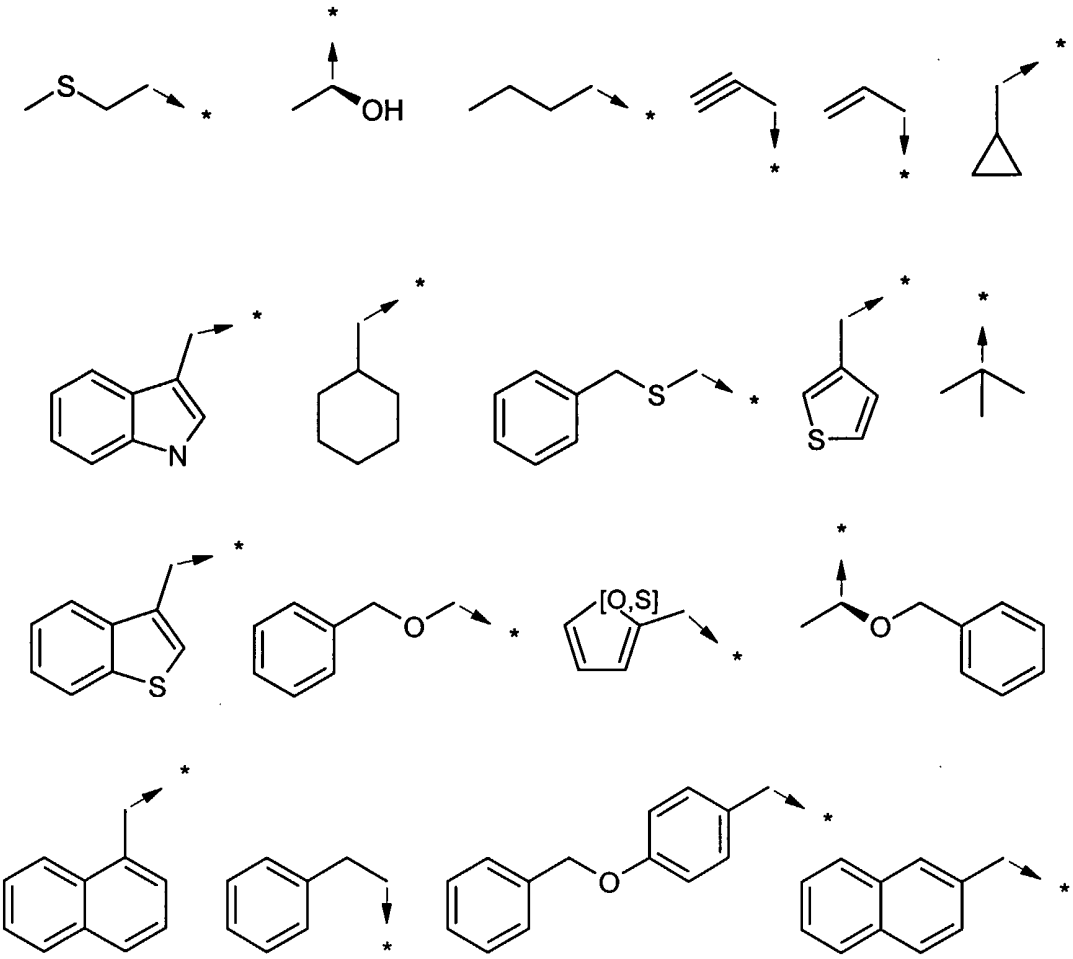


;

R11 représente H ;

R12 représente l'un des radicaux suivants :

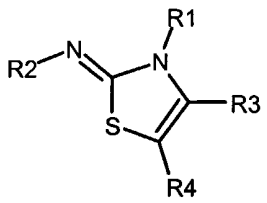




;

étant entendu que pour R4, lorsque le groupe aryle est substitué, il peut l'être de 1 à 5 fois (outre la liaison qui le relie au reste de la molécule) par des radicaux choisis indépendamment parmi le groupe composé d'un atome halogène et d'un radical alkyle ou alkoxy.

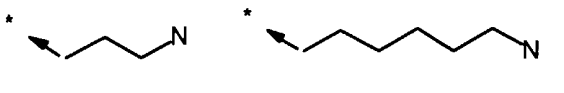
4. Composé selon l'une des revendications 1 à 3, caractérisé en ce qu'il répond à la formule générale **(II)**



(II)

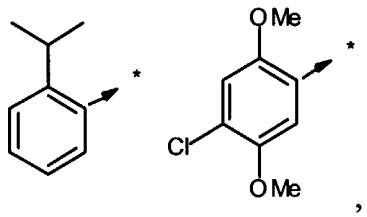
dans laquelle :

- soit R1 représente l'un des radicaux ci-après



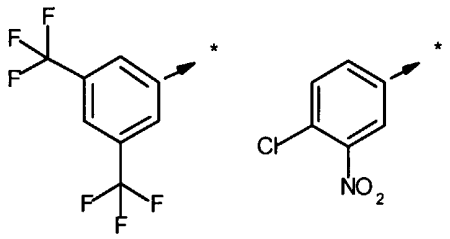
,

R2 représente l'un des radicaux ci-après



,

R3 représente l'un des radicaux ci-après



,

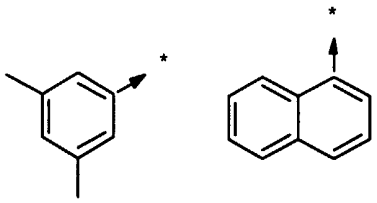
et R4 représente H ;

- soit encore R1 représente l'un des radicaux ci-après



,

R2 représente l'un des radicaux ci-après

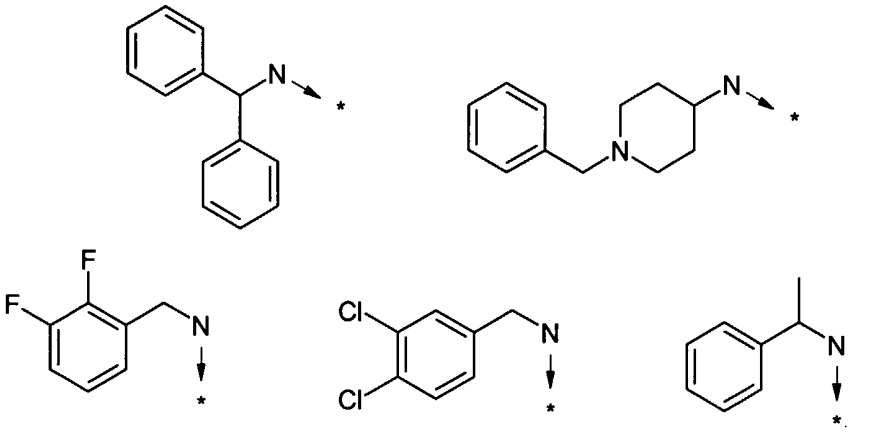


,

R3 représente COR5,

R4 représente H,

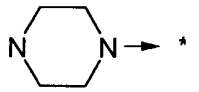
et R5 représente l'un des radicaux ci-après



;

- soit enfin R1 représente le radical –C(R11)(R12)-CO-R10 dans lequel

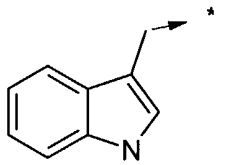
R10 représente le radical



,

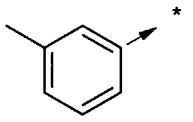
R11 représente H

et R12 représente le radical



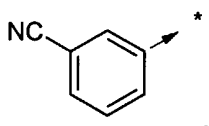
,

R2 représente le radical



,

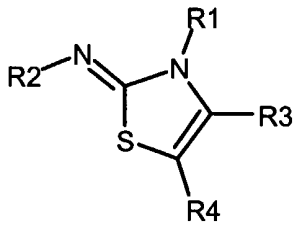
R3 représente le radical



,

et R4 représente H.

5. Procédé de préparation d'un composé de formule générale **(I)a**



(I)a

dans laquelle :

R1 représente un radical $-CH_2-A1-NH_2$, dans lequel A1 représente un radical $-(CH_2)_n-$, $-(CH_2)_n-O-(CH_2)_p-$, aralkylène ou cycloalkylalkylène, n et p représentant des entiers de 1 à 6 ;

R2 et R4 représentent les mêmes radicaux que dans la formule générale **(I)** telle que définie dans la revendication 1 ;

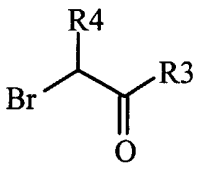
et R3 représente les mêmes radicaux que dans la formule générale **(I)** telle que définie dans la revendication 1, excepté les radicaux -CO-R5 ;

ledit procédé étant caractérisé en ce qu'il comprend les étapes successives suivantes :

1) traitement, dans un solvant aprotique comme le dichlorométhane ou le diméthylformamide, d'une résine p-nitrophénylcarbonate de Wang avec un large excès de diamine symétrique $R1-NH_2$;

2) traitement, dans un solvant aprotique comme le dichlorométhane ou le diméthylformamide, de la résine isolée après l'étape 1) avec un isothiocyanate aromatique de formule générale R2-N=C=S dans laquelle le radical R2 a la même signification que dans la formule générale **(I)a** ;

3) traitement, dans un solvant aprotique comme le dioxane ou le diméthylformamide, de la résine obtenue à l'étape 2) avec le composé de formule générale **(III)**



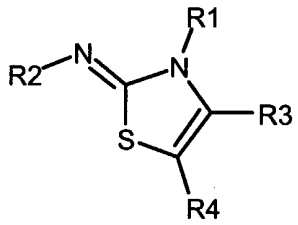
(III)

dans laquelle les radicaux R3 et R4 sont identiques à ceux qui ont été définis dans la formule générale **(I)a** ;

4) clivage de la résine dans des conditions acides ;

5) traitement dans des conditions basiques du produit obtenu après l'étape 4).

6. Procédé de préparation d'un composé de formule générale **(I)b**



(I)b

dans laquelle :

R1 représente les mêmes radicaux que dans la formule générale **(I)** telle que définie dans la revendication 1, excepté les radicaux du type $-CH_2-A1-NH_2$, dans lequel A1 représente un radical $-(CH_2)_n-$, $-(CH_2)_n-O-(CH_2)_p-$, aralkylène ou cycloalkylalkylène, n et p représentant des entiers de 1 à 6, et excepté également les radicaux -C(R11)(R12)-CO-R10 ;

R2 représente un radical aminoalkylphényle ;

R3 représente les mêmes radicaux que dans la formule générale **(I)** telle que définie dans la revendication 1, excepté les radicaux -CO-R5 ;

et R4 représente les mêmes radicaux que dans la formule générale **(I)** telle que définie dans la revendication 1 ;

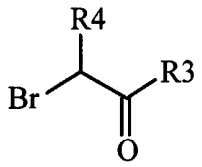
ledit procédé étant caractérisé en ce qu'il comprend les étapes successives suivantes :

1) traitement, dans un solvant aprotique comme le dichlorométhane ou le diméthylformamide, d'une résine p-nitrophénylcarbonate de Wang avec un excès d'aminoalkylaniline de formule générale $R2-NH_2$ dans laquelle le radical R2 a la même signification que dans la formule générale **(I)b** ;

2) traitement, dans un solvant aprotique comme le dichlorométhane ou le diméthylformamide, de la résine isolée après l'étape 1) avec un isothiocyanate de

formule générale R1-N=C=S dans laquelle le radical R1 a la même signification que dans la formule générale **(I)b** ;

3) traitement, dans un solvant aprotique comme le dioxane ou le diméthylformamide, de la résine obtenue à l'étape 2) avec le composé de formule générale **(III)**



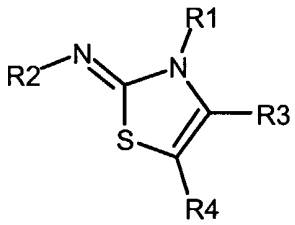
(III)

dans laquelle les radicaux R3 et R4 sont identiques à ceux qui ont été définis dans la formule générale **(I)b** ;

4) clivage de la résine dans des conditions acides ;

5) traitement dans des conditions basiques du produit obtenu après l'étape 4).

7. Procédé de préparation d'un composé de formule générale **(I)c**



(I)c

dans laquelle :

R1 représente un radical $-CH_2-A1-NH_2$, dans lequel A1 représente un radical $-(CH_2)_n-$, $-(CH_2)_n-O-(CH_2)_p-$, aralkylène ou cycloalkylalkylène, n et p représentant des entiers de 1 à 6 ;

R2 représente les mêmes radicaux que dans la formule générale **(I)** telle que définie dans la revendication 1 ;

R3 représente un radical -CO-R5 ;

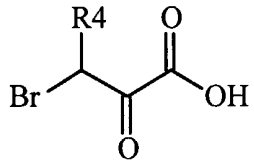
et R4 et R5 représentent les mêmes radicaux que dans la formule générale **(I)** telle que définie dans la revendication 1 ;

ledit procédé étant caractérisé en ce qu'il comprend les étapes successives suivantes :

1) traitement, dans un solvant aprotique comme le dichlorométhane ou le diméthylformamide, d'une résine p-nitrophénylcarbonate de Wang avec un large excès de diamine symétrique de formule générale R1-NH_2 dans laquelle le radical R1 a la même signification que dans la formule générale **(I)c** ;

2) traitement, dans un solvant aprotique comme le dichlorométhane ou le diméthylformamide, de la résine isolée après l'étape 1) avec un isothiocyanate aromatique de formule générale R2-N=C=S dans laquelle le radical R2 a la même signification que dans la formule générale **(I)c** ;

3) traitement, dans un solvant aprotique comme le dioxane ou le diméthylformamide, de la résine obtenue à l'étape 2) avec l'acide de formule générale **(IV)**



(IV)

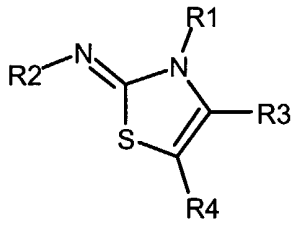
dans laquelle le radical R4 est identique à celui qui a été défini dans la formule générale **(I)c** ;

4) couplage peptidique ;

5) clivage de la résine dans des conditions acides ;

6) traitement dans des conditions basiques du produit obtenu après l'étape 5).

8. Procédé de préparation d'un composé de formule générale **(I)d**



(I)d

dans laquelle :

R1 représente les mêmes radicaux que dans la formule générale **(I)** telle que définie dans la revendication 1, excepté les radicaux du type -CH_2-A1-NH_2, dans lequel A1

représente un radical $-(CH_2)_n-$, $-(CH_2)_n-O-(CH_2)_p-$, aralkylène ou cycloalkylalkylène, n et p représentant des entiers de 1 à 6, et excepté également les radicaux –C(R11)(R12)-CO-R10 ;

R2 représente un radical aminoalkylphényle ;

R3 représente un radical -CO-R5 ;

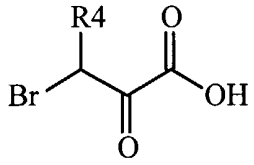
et R4 et R5 représentent les mêmes radicaux que dans la formule générale **(I)** telle que définie dans la revendication 1 ;

ledit procédé étant caractérisé en ce qu'il comprend les étapes successives suivantes :

1) traitement, dans un solvant aprotique comme le dichlorométhane ou le diméthylformamide, d'une résine p-nitrophénylcarbonate de Wang avec un excès d'aminoalkylaniline de formule générale $R2-NH_2$ dans laquelle le radical R2 a la même signification que dans la formule générale **(I)d** ;

2) traitement, dans un solvant aprotique comme le dichlorométhane ou le diméthylformamide, de la résine isolée après l'étape 1) avec un isothiocyanate de formule générale R1-N=C=S dans laquelle le radical R1 a la même signification que dans la formule générale **(I)d** ;

3) traitement, dans un solvant aprotique comme le dioxane ou le diméthylformamide, de la résine obtenue à l'étape 2) avec l'acide de formule générale **(IV)**



(IV)

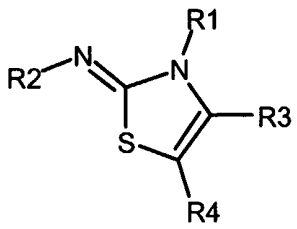
dans laquelle le radical R4 a la même signification que dans la formule générale **(I)d** ;

4) couplage peptidique ;

5) clivage de la résine dans des conditions acides ;

6) traitement dans des conditions basiques du produit obtenu après l'étape 5).

9. Procédé de préparation d'un composé de formule générale **(I)e**



(I)e

dans laquelle :

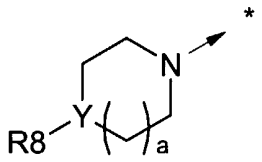
R1 représente les mêmes radicaux que dans la formule générale **(I)** telle que définie dans la revendication 1, excepté les radicaux du type $-CH_2-A1-NH_2$, dans lequel A1 représente un radical $-(CH_2)_n-$, $-(CH_2)_n-O-(CH_2)_p-$, aralkylène ou cycloalkylalkylène, n et p représentant des entiers de 1 à 6, et excepté également les radicaux -C(R11)(R12)-CO-R10 ;

R2 représente les mêmes radicaux que dans la formule générale **(I)** telle que définie dans la revendication 1 ;

R3 représente un radical –CO-R5 ;

R4 représente H ;

R5 représente un radical $-NH-CH_2-A1-NH_2$, dans lequel A1 représente un radical alkylène linéaire ou ramifié comptant de 1 à 6 atomes de carbone, $-(CH_2)_n-O-(CH_2)_p-$, aralkylène ou cycloalkylalkylène, n et p représentant des entiers de 1 à 6, ou encore R5 représente le radical N(R6)(R7) répondant à la formule générale suivante :



dans laquelle :

R8 représente H ;

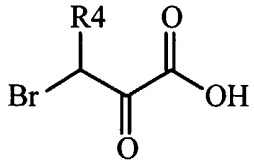
Y représente N ;

a représente 1 ou 2 ;

ledit procédé étant caractérisé en ce qu'il comprend les étapes successives suivantes :

1) traitement, dans un solvant aprotique comme le dichlorométhane ou le diméthylformamide, d'une résine p-nitrophénylcarbonate de Wang avec un large excès de diamine symétrique de formule générale R5-H ;

2) couplage peptidique avec l'acide de formule générale **(IV)** sur la résine obtenue à l'étape 1)



(IV)

dans laquelle le radical R4 a la même signification que dans la formule générale **(I)e** ;

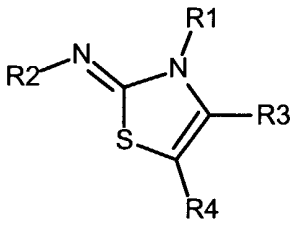
3) réaction de l'amine primaire de formule générale R1-NH_2 avec l'isothiocyanate de formule générale R2-NCS dans un solvant tel que le diméthylformamide ou le dioxane, R1 et R2 ayant les mêmes significations que dans la formule générale **(I)e** ;

4) addition de la thiourée obtenue à l'étape 3) à la résine obtenue à l'étape 2) et chauffage du mélange ;

5) clivage de la résine dans des conditions acides ;

6) traitement dans des conditions basiques du produit obtenu après l'étape 5).

10. Procédé de préparation d'un composé de formule générale **(I)f**



(I)f

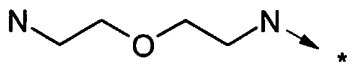
dans laquelle :

R1 représente un radical –C(R11)(R12)-CO-R10 ;

R2, R3 et R4 représentent les mêmes radicaux que dans la formule générale **(I)** telle que définie dans la revendication 1 ;

R10 représente un radical amino(C_2-C_7)alkylamino, ((aminoalkyl)aryl)alkylamino, ((aminoalkyl)cycloalkyl)alkylamino, pipérazinyle, homopipérazinyle,

ou R10 représente le radical représenté ci-dessous :



;

R11 représente H ;

R12 représente H ou un radical alkyle, (C_3-C_7)cycloalkyle, aralkyle carbocyclique ou hétérocyclique éventuellement substitué, propargyle, allyle, hydroxyalkyle, alkylthioalkyle, arylalkylalkoxyalkyle, arylalkylthioalkoxyalkyle ;

ledit procédé étant caractérisé en ce qu'il comprend les étapes successives suivantes :

1) traitement, dans un solvant aprotique comme le dichlorométhane ou le diméthylformamide, d'une résine p-nitrophénylcarbonate de Wang avec un large excès de diamine symétrique de formule générale R10-H dans laquelle R10 a la même signification que dans la formule générale **(I)f** ;

2) couplage peptidique de la résine obtenue à l'étape 1) avec un acide aminé de formule générale HOOC-C(R11)(R12)-NH-Fmoc dans laquelle R11 et R12 ont la même signification que dans la formule générale **(I)f** ;

3) clivage du groupe Fmoc de la résine obtenue à l'étape 2) ;

4) réaction de la résine obtenue à l'étape 3) avec un isothiocyanate de formule générale R2-NCS dans laquelle R2 a la même signification que dans la formule générale **(I)f** ;

5) clivage de la résine dans des conditions acides ;

6) traitement dans des conditions basiques du produit obtenu après l'étape 5).

11. A titre de médicament, un produit selon l'une des revendications 1 à 4 ou un sel pharmaceutiquement acceptable dudit produit.

12. Composition pharmaceutique comprenant à titre de principe actif un produit selon l'une des revendications 1 à 4 ou un sel pharmaceutiquement acceptable dudit produit.

13. Utilisation d'un produit selon l'une des revendications 1 à 4 ou d'un sel pharmaceutiquement acceptable dudit produit pour préparer un médicament destiné à

traiter les états pathologiques ou les maladies dans lesquels un (ou plusieurs) des récepteurs de la somatostatine est (sont) impliqué(s).

14. Utilisation selon la revendication 13, caractérisée en ce que les états pathologiques ou les maladies à traiter sont choisis parmi le groupe composé des états pathologiques ou des maladies qui suivent : l'acromégalie, les adénomes hypophysaires, la maladie de Cushing, les gonadotrophinomes et les prolactinomes, les effets secondaires cataboliques des glucocorticoïdes, le diabète insulinodépendant, la rétinopathie diabétique, la néphropathie diabétique, le syndrome X, le phénomène de Dawn, l'angiopathie, l'angioplastie, l'hyperthyroïdie, le gigantisme, les tumeurs gastroentéropancréatiques endocriniennes dont le syndrome carcinoïde, le VIPome, l'insulinome, la nésidioblastose, l'hyperinsulinémie, le glucagonome, le gastrinome et le syndrome de Zollinger-Ellison, le GRFome ainsi que le saignement aigu des varices œsophagiennes, les ulcères, le reflux gastroœsophagien, le reflux gastroduodénal, la pancréatite, les fistules entérocutanées et pancréatiques mais aussi les diarrhées, les diarrhées réfractaires du syndrome d'immunodépression acquise, la diarrhée chronique sécrétoire, la diarrhée associée avec le syndrome de l'intestin irrité, les diarrhées induites par la chimiothérapie, les troubles liés au peptide libérateur de gastrine, les pathologies secondaires aux greffes intestinales, l'hypertension portale ainsi que les hémorragies des varices chez des malades avec cirrhose, l'hémorragie gastro-intestinale, l'hémorragie de l'ulcère gastroduodénale, le saignement des vaisseaux greffés, la maladie de Crohn, les scléroses systémiques, le dumping syndrome, le syndrome du petit intestin, l'hypotension, la sclérodermie et le carcinome thyroïdien médullaire, les maladies liées à l'hyperprolifération cellulaire comme les cancers et plus particulièrement le cancer du sein, le cancer de la prostate, le cancer thyroïdien ainsi que le cancer pancréatique et le cancer colorectal, les fibroses et plus particulièrement la fibrose du rein, la fibrose du foie, la fibrose du poumon, la fibrose de la peau, également la fibrose du système nerveux central ainsi que celle du nez et la fibrose induite par la chimiothérapie, et, dans d'autres domaines thérapeutiques, les céphalées y compris les céphalées associées aux tumeurs hypophysaires, les douleurs, les désordres inflammatoires comme l'arthrite, les accès de panique, la chimiothérapie, la cicatrisation des plaies, l'insuffisance rénale résultant d'un retard de croissance, l'hyperlipidémie, l'obésité et le retard de croissance lié à l'obésité, le retard de croissance utérin, la dysplasie du squelette, le syndrome de Noonan, le syndrome d'apnée du sommeil, la maladie de Graves, la maladie polykystique des ovaires, les pseudokystes pancréatiques et ascites, la leucémie, le méningiome, la cachexie cancéreuse, l'inhibition des H pylori, le psoriasis, le rejet chronique des allogreffes ainsi que la maladie d'Alzheimer et enfin l'ostéoporose.

15. Utilisation selon la revendication 14, caractérisée en ce que les états pathologiques ou les maladies à traiter sont choisis parmi le groupe composé des états pathologiques ou des maladies qui suivent : l'acromégalie, les adénomes hypophysaires ou les tumeurs gastroentéropancréatiques endocriniennes dont le syndrome carcinoïde, et les saignements gastro-intestinaux.

INTERNATIONAL SEARCH REPORT

Internationa lication No
PCT/FR 00/02095

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C07D277/42 C07D277/56 C07D417/00 A61K31/426 A61P5/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

BEILSTEIN Data, CHEM ABS Data, WPI Data, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	KALCHEVA V ET AL: "Ring transformations of oxazoles and their derivatives. Synthesis of 2,3-dihydro-2-(2-hydroxyphenylimino) -4-methylthiazoles by reaction of 2-(2-oxopropylthio)benzoxazoles with amines" LIEBIGS ANNALEN DER CHEMIE, no. 12, December 1993 (1993-12), pages 1319-22, XP002136745 the whole document --- -/--	1-3

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
7 November 2000	21/11/2000

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Allard, M

Form PCT/ISA/210 (second sheet) (July 1992)

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
X	OMAR A M M E ET AL: "Synthesis and biological evaluation of new 2,3-dihydrothiazole derivatives for antimicrobial, antihypertensive, and anticonvulsant activities" JOURNAL OF PHARMACEUTICAL SCIENCES, vol. 73, no. 8, August 1984 (1984-08), pages 1166-8, XP002136746 the whole document	1-3,11, 12
X	HASSAN H Y ET AL: "Synthesis and antimicrobial activity of pyridines bearing thiazoline and thiazolidinone moieties" CHEMICAL & PHARMACEUTICAL BULLETIN, vol. 46, no. 5, May 1998 (1998-05), pages 863-6, XP002136747 the whole document	1-3,11, 12
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X	EP 0 023 964 A (HOECHST AKTIENGESELLSCHAFT) 18 February 1981 (1981-02-18) the whole document	1-3,11, 12
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X	DATABASE CROSSFIRE 'Online! Beilstein Institut fuer Literatur der organischen Chemie; XP002136748 * Beilstein Registry Number 21007 , 6514267 et 208869 * & POL. J. CHEM., vol. 58, no. 4/5/6, 1984, pages 447-454, -/--	1-3

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE CROSSFIRE 'Online! Beilstein Institut fuer Literatur der organischen Chemie; XP002136749 * Beilstein Registry Number 241201 * & UNIV. KANS. SCI. BULL., vol. 24, 1936, page 45, 48 ---	1-3
X	DATABASE CROSSFIRE 'Online! Beilstein Institut fuer Literatur der organischen Chemie; XP002136750 * Beilstein Registry Number 184211 * & J. INDIAN CHEM. SOC., vol. 8, 1931, page 147, 180 ---	1-3
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication,where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE CROSSFIRE 'Online! Beilstein Institut fuer Literatur der organischen Chemie; XP002136756 * Beilstein Registry Number 6814219 et 6811955 * & SYNTH. COMMUN., vol. 24, no. 4, 1994, pages 495-512,	1-3
A	LIU S ET AL: "Nonpeptide somatostatin agonists with sst4 selectivity: syntheses and structure-activity relationships of thioureas" JOURNAL OF MEDICINAL CHEMISTRY, vol. 41, no. 24, 1998, pages 4693-705, XP002136780 the whole document	1,13

International application No.
PCT/FR00/02095

Continued from field I.2

Claim nos.: 1-3, 11, 12 (all in part)

The initial phase of the search revealed a very large number of documents that were relevant to the novelty of claim nos. 1-3, 11 and 12. So many documents were found that it is impossible to establish which parts of these claims can be considered as defining the subject matter for which protection could legitimately be sought (PCT Art. 6). It was therefore impossible to carry out a meaningful, complete search and provide a complete search report covering the entire scope of these claims. The search and the search report in respect of these claims can only be considered complete to the extent that they address the examples given in the application.

The applicant is advised that patent claims relating to inventions for which no international search has been produced cannot normally be the subject of an international preliminary examination (PCT Rule 66.1(e)). As a general rule, the EPO in its capacity as the authority entrusted with the task of carrying out an international preliminary examination will not conduct a preliminary examination for subjects in respect of which no search has been provided. This also applies to cases where the patent claims were amended after receipt of the international search report (PCT Article 19) or to cases where the applicant presents new patent claims in the course of the PCT Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/FR 00/02095

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
PCT/FR 00/02095

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RAPPORT DE RECHERCHE INTERNATIONALE

Demande Int tionale No
PCT/FR 00/02095

A. CLASSEMENT DE L'OBJET DE LA DEMANDE
CIB 7 C07D277/42 C07D277/56 C07D417/00 A61K31/426 A61P5/02

Selon la classification internationale des brevets (CIB) ou à la fois selon la classification nationale et la CIB

B. DOMAINES SUR LESQUELS LA RECHERCHE A PORTE

Documentation minimale consultée (système de classification suivi des symboles de classement)
CIB 7 C07D

Documentation consultée autre que la documentation minimale dans la mesure où ces documents relèvent des domaines sur lesquels a porté la recherche

Base de données électronique consultée au cours de la recherche internationale (nom de la base de données, et si réalisable, termes de recherche utilisés)
BEILSTEIN Data, CHEM ABS Data, WPI Data, EPO-Internal

C. DOCUMENTS CONSIDERES COMME PERTINENTS

Catégorie °	Identification des documents cités, avec, le cas échéant, l'indication des passages pertinents	no. des revendications visées
X	KALCHEVA V ET AL: "Ring transformations of oxazoles and their derivatives. Synthesis of 2,3-dihydro-2-(2-hydroxyphenylimino) -4-methylthiazoles by reaction of 2-(2-oxopropylthio)benzoxazoles with amines" LIEBIGS ANNALEN DER CHEMIE, no. 12, décembre 1993 (1993-12), pages 1319-22, XP002136745 le document en entier --- -/--	1-3

[X] Voir la suite du cadre C pour la fin de la liste des documents

[X] Les documents de familles de brevets sont indiqués en annexe

° Catégories spéciales de documents cités:

"A" document définissant l'état général de la technique, non considéré comme particulièrement pertinent

"E" document antérieur, mais publié à la date de dépôt international ou après cette date

"L" document pouvant jeter un doute sur une revendication de priorité ou cité pour déterminer la date de publication d'une autre citation ou pour une raison spéciale (telle qu'indiquée)

"O" document se référant à une divulgation orale, à un usage, à une exposition ou tous autres moyens

"P" document publié avant la date de dépôt international, mais postérieurement à la date de priorité revendiquée

"T" document ultérieur publié après la date de dépôt international ou la date de priorité et n'appartenenant pas à l'état de la technique pertinent, mais cité pour comprendre le principe ou la théorie constituant la base de l'invention

"X" document particulièrement pertinent; l'inven tion revendiquée ne peut être considérée comme nouvelle ou comme impliquant une activité inventive par rapport au document considéré isolément

"Y" document particulièrement pertinent; l'inven tion revendiquée ne peut être considérée comme impliquant une activité inventive lorsque le document est associé à un ou plusieurs autres documents de même nature, cette combinaison étant évidente pour une personne du métier

"&" document qui fait partie de la même famille de brevets

Date à laquelle la recherche internationale a été effectivement achevée	Date d'expédition du présent rapport de recherche internationale
7 novembre 2000	21/11/2000

Nom et adresse postale de l'administration chargée de la recherche internationale	Fonctionnaire autorisé
Office Européen des Brevets, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Allard, M

C.(suite) DOCUMENTS CONSIDERES COMME PERTINENTS

Catégorie °	Identification des documents cités, avec,le cas échéant, l'indicationdes passages pertinents	no. des revendications visées
X	OMAR A M M E ET AL: "Synthesis and biological evaluation of new 2,3-dihydrothiazole derivatives for antimicrobial, antihypertensive, and anticonvulsant activities" JOURNAL OF PHARMACEUTICAL SCIENCES, vol. 73, no. 8, août 1984 (1984-08), pages 1166-8, XP002136746 le document en entier	1-3,11, 12
X	HASSAN H Y ET AL: "Synthesis and antimicrobial activity of pyridines bearing thiazoline and thiazolidinone moieties" CHEMICAL & PHARMACEUTICAL BULLETIN, vol. 46, no. 5, mai 1998 (1998-05), pages 863-6, XP002136747 le document en entier	1-3,11, 12
X	US 3 345 257 A (DUERR D ET AL) 3 octobre 1967 (1967-10-03) le document en entier	1-3
X	EP 0 683 160 A (SUMITOMO CHEMICAL COMPANY, LIMITED) 22 novembre 1995 (1995-11-22) le document en entier	1-3
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C.(suite) DOCUMENTS CONSIDERES COMME PERTINENTS

Catégorie °	Identification des documents cités, avec, le cas échéant, l'indicationdes passages pertinents	no. des revendications visées
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C.(suite) DOCUMENTS CONSIDERES COMME PERTINENTS

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A	LIU S ET AL: "Nonpeptide somatostatin agonists with sst4 selectivity: syntheses and structure-activity relationships of thioureas" JOURNAL OF MEDICINAL CHEMISTRY, vol. 41, no. 24, 1998, pages 4693-705, XP002136780 le document en entier -----	1,13

SUITE DES RENSEIGNEMENTS INDIQUES SUR PCT/ISA/ 210

Suite du cadre I.2

Revendications nos.: 1-3, 11, 12 (toutes en partie)

La phase initiale de la recherche a mis en évidence un très grand nombre de documents pertinents quant à la question de la nouveauté des revendictions 1-3, 11 et 12. Tant de documents ont été trouvés qu'il est impossible de déterminer quelles parties de ces revendications peuvent être considérées comme définissant la matière pour laquelle une protection pourrait être légitimement revendiquée (Article 6 PCT). Pour ces raisons, une recherche significative et un rapport de recherche complets sur toute l'étendue de ces revendications sont impossibles. La recherche et le rapport de recherche à l'égard de ces revendications ne peuvent être considérés comme complets que dans la mesure où les exemples de la demande sont visés.

L'attention du déposant est attirée sur le fait que les revendications, ou des parties de revendications, ayant trait aux inventions pour lesquelles aucun rapport de recherche n'a été établi ne peuvent faire obligatoirement l'objet d'un rapport préliminaire d'examen (Règle 66.1(e) PCT). Le déposant est averti que la ligne de conduite adoptée par l'OEB agissant en qualité d'administration chargée de l'examen préliminaire international est, normalement, de ne pas procéder à un examen préliminaire sur un sujet n'ayant pas fait l'objet d'une recherche. Cette attitude restera inchangée, indépendamment du fait que les revendications aient ou n'aient pas été modifiées, soit après la réception du rapport de recherche, soit pendant une quelconque procédure sous le Chapitre II.

RAPPORT DE RECHERCHE INTERNATIONALE

Renseignements relatifs aux membres de familles de brevets

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